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STATE OF ILLINOIS  
DEPARTMENT OF REGISTRATION AND EDUCATION

DIVISION OF THE  
STATE GEOLOGICAL SURVEY

FRANK W. DE WOLF, Chief

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Cooperative Mining Series

EXTRACT A FROM BULLETIN No. 27

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ANALYSES OF ILLINOIS COALS

COMPILED BY

G. W. HAWLEY

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ILLINOIS MINING INVESTIGATIONS

Prepared under a cooperative agreement between the Illinois State Geological Survey  
Division, the Engineering Experiment Station of the University of  
Illinois, and the U. S. Bureau of Mines



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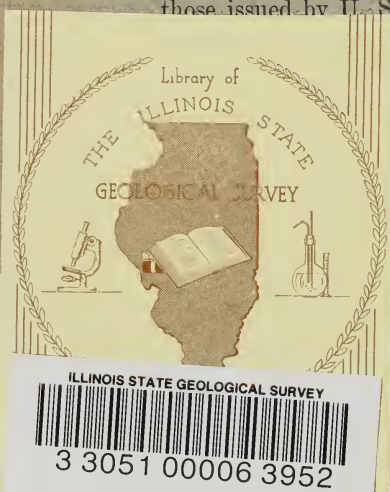
URBANA, ILLINOIS

1923

The Forty-seventh General Assembly of the State of Illinois, with a view of conserving the lives of the mine workers and the mineral resources of the State, authorized an investigation of the coal resources and mining practices of Illinois by the Department of Mining Engineering of the University of Illinois and the State Geological Survey Division in cooperation with the United States Bureau of Mines. A cooperative agreement was approved by the Secretary of the Interior and by representatives of the State of Illinois.

The direction of this investigation is vested in the Director of the United States Bureau of Mines, the Chief of the State Geological Survey Division, and the Director, Engineering Experiment Station, University of Illinois, who jointly determined the methods to be employed in the conduct of the work and exercise general editorial supervision over the publication of the results, but each party to the agreement directs the work of its agent in carrying on the investigation thus mutually agreed on.

The reports of the investigation are issued in the form of bulletins, either by the State Geological Survey Division, the Engineering Experiment Station, University of Illinois, or the United States Bureau of Mines. For copies of the bulletins issued by the State Geological Survey Division, address State Geological Survey Division, Urbana, Illinois; for those issued by the Engineering Station, address Engineering Station, University of Illinois, Urbana, Illinois; and for those issued by U. S. Bureau of Mines, address Director, U. S. Bureau of Mines, Washington, D. C. (See list at end of book.)



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FRANK W. DeWOLF, *Chief*

Committee of the Board of Natural Resources  
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Geologist

ILLINOIS STATE JOURNAL CO.  
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# ANALYSES OF ILLINOIS COALS

Compiled by G. W. Hawley

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## INTRODUCTION

A study of the chemical character of Illinois coals based on new face samples collected in 1921 from approximately 100 mines in various parts of the State was begun with a view to extending our knowledge of the chemical properties, heating quality, and special adaptability of all Illinois coals. A bulletin will be issued at an early date which will present the conclusions based on these data, but it seems desirable to publish the analytical data prior to the complete report. The analyses have been combined with data previously published by the State Geological Survey<sup>1 2</sup> and also by the United States Bureau of Mines. References to the bulletins in which the analytical results of coal samples collected by the United States Bureau of Mines have been published, are indicated throughout the tables of analyses in order that the detailed descriptions of the samples may be consulted.

## ANALYTICAL DATA

### ANALYSES OF MINE SAMPLES

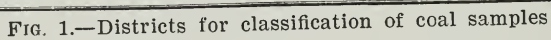
Table 1, which gives an alphabetical list of counties including the district classification (see fig. 1) and the coal beds for each county, serves as a cross reference.

The complete analyses of mine samples grouped by coal beds, under which the counties represented are arranged alphabetically, are given in Table 2. Analyses having the same index number are of samples for a single mine. Obviously, not as much dependence can be placed on a single analysis from a given mine as may be placed on a group from one mine. Two sets of values are given for each sample—one including the normal or coal-bed moisture, and the other calculated to the dry-coal or moisture-free basis. There is also given the value of the unit-coal in British thermal units as derived by the formula previously explained<sup>2</sup>.

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1. Parr, S. W., Chemical study of Illinois coals: Ill. Mining Investigations Bull. 3, 1916.

2. Parr, S. W., Purchase and sale of Illinois coal on specification: Ill. State Geol. Surv. Bull. 29, 1914.





In Table 3 are presented the average analyses and heat values for separate mines and by counties grouped according to the districts shown in figure 1.

TABLE 1.—*Alphabetical arrangement of counties.*

County	Coal bed	District	County	Coal bed	District
Bond.....	6	VII	McLean.....	2, 5	IV
Bureau.....	2	I	Menard.....	5	IV
Calhoun.....	2	III	Mercer.....	1	III
Christian.....	1, 2, 6	IV, VII	Montgomery.....	6	VII
Clinton.....	6	VII	Moultrie.....	6	VII
Franklin.....	6	VI	Peoria.....	5	IV
Fulton.....	1, 5	III, IV	Perry.....	6	VI, VII
Gallatin.....	5, 6	V	Randolph.....	6	VII
Grundy.....	2	I	St. Clair.....	6	VII
Jackson.....	2, 6	II, VI	Saline.....	5	V
LaSalle.....	2, 5, 7	I	Sangamon.....	5, 6	IV, VII
Livingston.....	2, 5	I	Schuyler.....	1, 2	III
Logan.....	5	IV	Shelby.....	6	VII
Macon.....	5	IV	Tazewell.....	5	IV
Macoupin.....	6	VII	Vermilion.....	6, 7	VIII
Madison.....	6	VII	Washington.....	6	VII
Marion.....	6	VII	White.....	6	V
Marshall.....	2	I	Williamson.....	6	VI
McDonough.....	2	III			

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output).

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					1st: "As received," with total moisture							
					2nd: "Dry" or moisture free							
					Moisture	Volatile matter	Fixed carbon	Ash				
No. 1 Coal.												
5229	21	7/12	Christian-----	1	11.27 Dry	38.68 43.59	40.55 45.70	9.50 10.71	2.07 2.33	.33 .37	11445 12898	----- 14666
5230	21	7/12	Christian-----	1	11.52 Dry	38.78 43.83	41.01 46.35	8.69 9.82	2.42 2.73	.97 1.10	11648 13163	----- 14707
5231	21	7/12	Christian-----	1	11.13 Dry	39.21 44.12	41.26 46.43	8.40 9.45	2.56 2.88	.61 .69	11715 13183	----- 14779
12469	105	3/21	Fulton-----	1	11.38 Dry	38.66 43.62	39.51 44.58	10.45 11.80	4.52 5.10	.87 .98	11436 12905	----- 14979
12470	105	3/21	Fulton-----	1	11.42 Dry	38.17 43.09	40.07 45.24	10.34 11.67	4.76 5.37	.45 .51	11409 12880	----- 14934
12471	105	3/21	Fulton-----	1	10.84 Dry	38.42 43.09	40.91 45.88	9.83 11.03	5.61 6.29	.54 .61	11554 12959	----- 14939
5338	19	8/12	Mercer-----	1	13.23 Dry	40.29 46.43	37.20 42.88	9.28 10.69	4.37 5.04	.41 .47	11104 12797	----- 14641
5339	19	8/12	Mercer-----	1	15.24 Dry	37.66 44.44	35.73 42.15	11.37 13.41	4.80 5.66	1.47 1.73	10353 12214	----- 14478
5340	19	8/12	Mercer-----	1	15.15 Dry	39.06 44.44	38.48 42.15	7.31 14.41	3.30 5.66	.17 1.73	11252 12214	----- 14478
5363	19	8/12	Mercer-----	1	14.97 Dry	38.27 46.03	37.07 45.36	9.69 8.61	3.75 3.89	.33 .19	9637 13260	----- 14760
5364	19	8/12	Mercer-----	1	14.46 Dry	40.42 44.99	35.33 43.61	9.79 11.40	4.23 4.95	.69 .43	10780 12749	----- 14712
5365	19	8/12	Mercer-----	1	14.07 Dry	39.95 47.24	34.01 41.32	11.97 11.44	4.55 4.94	.78 .59	10525 12603	----- 14551
5359	18	8/12	Mercer-----	1	14.58 Dry	39.49 46.49	36.82 39.59	9.11 13.92	5.60 5.29	.15 .91	10894 12247	----- 14604
5360	18	8/12	Mercer-----	1	15.07 Dry	38.14 46.23	37.44 43.09	9.35 10.68	4.85 6.56	.34 .18	10790 12754	----- 14642
5361	18	8/12	Mercer-----	1	14.10 Dry	39.60 44.91	36.73 44.01	9.57 11.02	3.92 5.71	.23 .38	10956 12705	----- 14618
5371	17	8/12	Mercer-----	1	17.75 Dry	39.50 48.03	34.61 42.08	8.14 9.89	5.53 6.72	.86 1.05	10435 12687	----- 14373
5372	17	8/12	Mercer-----	1	17.50 Dry	38.78 47.00	33.66 40.80	10.06 12.20	4.51 5.46	.29 .35	10238 12409	----- 14372
No. 2 Coal.												
5324	1	8/12	Bureau-----	2	16.65 Dry	36.66 43.99	38.58 46.29	8.11 9.72	3.40 4.07	.67 .80	10740 12884	----- 14533
5325	1	8/12	Bureau-----	2	15.08 Dry	40.12 47.25	36.35 42.80	8.45 9.95	3.68 4.33	.91 1.07	10831 12754	----- 14431
5326	1	8/12	Bureau-----	2	16.83 Dry	36.54 43.93	39.19 47.12	7.44 8.95	2.64 3.17	.89 1.07	10788 12970	----- 14463
5312	10	8/12	Bureau-----	2	14.88 Dry	38.69 45.45	37.25 43.76	9.08 10.79	3.83 4.50	1.07 1.25	10685 12553	----- 14357

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5313	10	8/12	Bureau.....	2	17.43 Dry 46.10	38.07 47.76	39.44 47.76	5.06 6.14	2.68 3.25	.52 .63	11070 13407	----- 14462
5314	10	8/12	Bureau.....	2	16.07 Dry 47.28	39.68 45.71	38.36 45.60	5.89 7.01	2.96 3.53	.57 .63	1216 13363	----- 14571
5348	8	8/12	Bureau.....	2	15.19 Dry 46.78	39.67 46.78	38.69 45.60	6.45 7.62	2.20 2.62	.99 1.17	11206 13213	----- 14480
5349	8	8/12	Bureau.....	2	17.34 Dry 44.90	37.12 47.52	39.28 47.52	6.26 7.58	2.80 3.38	.49 .59	11006 13314	----- 14612
5350	8	8/12	Bureau.....	2	16.97 Dry 46.56	38.66 46.56	34.83 41.95	9.54 11.49	2.25 2.71	2.29 2.91	10397 12522	----- 14386
2641	230	7/09	Calhoun.....	2	10.62 Dry 42.67	38.13 44.36	39.65 44.36	11.60 12.97	4.96 5.55	-----	11224 12557	----- 14806
5205	21	7/12	Christian.....	2	12.07 Dry 44.77	39.36 47.66	41.91 47.66	6.66 7.57	3.74 4.26	.07 .09	11776 13393	----- 14730
5206	21	7/12	Christian.....	2	12.53 Dry 44.12	38.00 44.12	40.62 46.44	8.25 9.44	3.67 4.22	.31 .35	11389 13020	----- 14641
5207	21	7/12	Christian.....	2	14.30 Dry 46.14	39.54 46.14	40.30 47.02	5.86 6.84	2.00 2.33	.24 .28	11609 13544	----- 14702
5367	6	8/12	Grundy.....	2	19.97 Dry 47.68	38.16 47.68	37.45 46.79	4.42 5.53	1.82 2.27	.65 .79	10936 13664	----- 14603
5368	6	8/12	Grundy.....	2	18.95 Dry 46.39	37.60 46.39	38.23 47.16	5.22 6.45	2.46 3.04	.64 .79	10787 13309	----- 14400
5369	6	8/12	Grundy.....	2	19.66 Dry 46.06	37.01 46.06	38.16 47.50	5.17 6.44	2.03 2.53	.83 1.03	10734 13360	----- 14337
5373	5	8/12	Grundy.....	2	17.29 Dry 46.68	38.61 46.68	36.69 44.36	7.41 8.96	2.87 3.47	1.44 1.74	10708 12947	----- 14447
5374	5	8/12	Grundy.....	2	13.73 Dry 46.22	39.87 46.22	42.19 48.90	4.21 4.88	2.04 2.37	1.47 1.71	11787 13662	----- 14466
5377	5	8/12	Grundy.....	2	17.01 Dry 47.57	39.48 47.57	36.74 44.27	6.77 8.16	3.32 4.00	1.05 1.27	10834 13055	----- 14446
5375	7	8/12	Grundy.....	2	16.84 Dry 46.13	38.37 46.13	41.19 49.53	3.60 4.34	1.74 2.09	.04 .05	11508 13838	----- 14583
5376	7	8/12	Grundy.....	2	15.81 Dry 45.48	39.28 45.48	39.77 47.24	6.13 7.28	2.30 2.73	.24 .28	11212 13318	----- 14545
5378	7	8/12	Grundy.....	2	16.23 Dry 46.22	38.71 46.22	40.61 48.47	4.45 5.31	2.47 2.94	.32 .38	11461 13683	----- 14610
5225	14	7/12	Jackson.....	2	7.72 Dry 38.02	35.09 38.02	48.56 52.62	8.63 9.36	2.01 2.18	.29 .31	12248 13272	----- 14839
5226	14	7/12	Jackson.....	2	8.77 Dry 35.93	32.78 35.93	50.58 55.44	7.87 8.63	2.00 2.19	.02 .03	12253 13430	----- 14885
5228	14	7/12	Jackson.....	2	9.18 Dry 38.20	34.70 38.20	51.58 56.80	4.54 5.00	.60 .66	.05 .06	12752 14040	----- 14867
5248	13	7/12	Jackson.....	2	9.88 Dry 36.87	33.23 36.87	52.43 58.18	4.46 4.95	.70 .77	.33 .36	12709 14103	----- 14926
5249	13	7/12	Jackson.....	2	10.91 Dry 37.61	33.51 37.61	51.20 57.47	4.38 4.92	1.14 1.28	.20 .23	12503 14034	----- 14863

TABLE 2.—*Analyses of mine samples (not exactly indicative of commercial output)*—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5250	13	7/12	Jackson-----	2	9.76 Dry	33.45 37.06	52.07 57.71	4.72 5.23	1.08 1.20	.51 .56	12629 13996	----- 14874
5351	12	7/12	Jackson-----	2	9.51 Dry	33.13 36.62	52.12 57.59	5.24 5.79	.66 .73	.94 1.03	12500 13814	----- 14758
5252	12	7/12	Jackson-----	2	9.37 Dry	33.39 36.48	49.29 54.38	7.95 8.78	2.11 2.32	.94 1.03	11972 13208	----- 14671
5253	12	7/12	Jackson-----	2	9.99 Dry	32.51 36.12	51.88 57.63	5.62 6.25	.62 .69	.20 .22	12308 13673	----- 14686
5496	16	8/12	Jackson-----	2	9.25 Dry	34.67 38.20	50.53 55.68	5.55 6.12	1.41 1.56	.13 .14	12528 13804	----- 14834
5497	16	8/12	Jackson-----	2	9.56 Dry	34.52 38.16	50.47 55.83	5.45 6.01	1.32 1.46	.27 .30	12483 13781	----- 14811
5498	16	8/12	Jackson-----	2	9.20 Dry	34.48 37.97	50.54 55.66	5.78 6.37	1.44 1.59	.19 .21	12481 13746	----- 14814
5286	15	8/12	Jackson-----	2	8.32 Dry	35.28 38.49	51.10 55.74	5.30 5.77	1.39 1.53	.19 .21	12671 13822	----- 14791
5287	15	8/12	Jackson-----	2	8.86 Dry	35.00 38.40	49.74 54.57	6.40 7.03	1.69 1.85	.07 .08	12436 13645	----- 14830
5288	15	8/12	Jackson-----	2	8.91 Dry	34.03 37.36	53.17 58.37	3.89 4.27	1.15 1.26	.07 .08	12844 14101	----- 14823
12662	104	6/21	Jackson-----	2	4.56 Dry	37.90 39.71	44.23 46.35	13.31 13.94	6.62 6.94	.03 .03	11886 12106	----- 14921
12663	104	6/21	Jackson-----	2	4.57 Dry	34.75 36.41	46.22 48.41	14.49 15.18	7.63 8.00	.04 .04	11670 12229	----- 14934
5388	2	8/12	LaSalle-----	2	14.22 Dry	39.49 46.03	36.94 43.06	9.35 10.91	4.46 5.20	.80 .93	10887 12691	----- 14562
5389	2	8/12	LaSalle-----	2	15.16 Dry	40.13 47.32	38.10 44.88	6.61 7.80	2.99 3.51	.64 .70	11147 13138	----- 14458
5390	2	8/12	LaSalle-----	2	14.43 Dry	40.01 46.75	35.89 41.94	9.67 11.31	4.47 5.23	1.03 1.21	10678 12476	----- 14404
5306	3	8/12	LaSalle-----	2	14.29 Dry	41.35 48.24	38.73 45.18	5.63 6.58	2.09 2.44	.19 .22	11487 13401	----- 14504
5307	3	8/12	LaSalle-----	2	16.05 Dry	37.03 44.11	37.06 44.16	9.86 11.73	4.35 5.18	.59 .70	10459 12458	----- 14440
5311	3	8/12	LaSalle-----	2	14.82 Dry	40.93 48.05	35.20 41.33	9.05 10.62	3.42 4.02	.59 1.17	10760 12632	----- 14401
5351	9	8/12	LaSalle-----	2	16.52 Dry	38.88 46.57	36.50 43.72	8.10 9.71	2.87 3.44	1.02 1.22	10686 12800	----- 14412
5352	9	8/12	LaSalle-----	2	17.77 Dry	39.05 47.48	34.15 41.55	9.03 10.97	3.62 4.76	1.25 1.52	10279 12500	----- 14334
5353	9	8/12	LaSalle-----	2	18.06 Dry	39.02 47.62	32.94 40.20	9.98 12.18	2.74 3.34	2.20 2.69	10209 12460	----- 14460
84450	102	3/22	LaSalle-----	2	14.5 Dry	36.0 42.0	41.7 48.9	7.8 9.1	3.5 4.1	.67 .79	11130 13010	----- 15564
84451	102	3/22	LaSalle-----	2	14.0 Dry	34.9 40.6	43.2 50.3	7.9 9.1	2.3 2.7	.90 1.04	11240 13070	----- 14584

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
84452	102	3/22	LaSalle.....	2	15.7 Dry	33.9 40.2	41.9 49.7	8.5 10.1	4.0 4.8	.59 .70	10800 12800	14528
10264	103	9/17	LaSalle.....	2	12.61 Dry	38.89 44.51	42.36 48.46	6.14 7.03	2.66 3.04	-----	11892 13608	14830
10263	103	9/17	LaSalle.....	2	12.19 Dry	39.92 45.47	40.18 45.75	7.17 8.78	2.56 2.91	-----	11667 13289	14780
1741	<sup>1</sup> B. M.	6/05	LaSalle.....	2	13.87 Dry	37.26 43.26	38.56 44.77	10.31 11.97	3.44 3.99	-----	10985 12755	14792
1742	<sup>1</sup> B. M.	6/05	LaSalle.....	2	15.55 Dry	36.21 42.88	40.66 48.14	7.58 8.98	3.01 3.56	-----	-----	-----
1779	<sup>1</sup> B. M.	6/05	LaSalle.....	2	12.39 Dry	36.89 42.11	41.80 47.71	8.92 10.18	3.92 4.47	-----	11399 13012	14743
5357	4	8/12	Marshall.....	2	16.46 Dry	38.48 46.06	38.27 45.80	6.79 8.14	2.91 3.48	.28 .34	11162 13360	14764
5356	4	8/12	Marshall.....	2	16.79 Dry	36.81 44.23	40.34 48.49	6.06 7.28	2.59 3.11	.41 .49	11130 13375	14620
5358	4	8/12	Marshall.....	2	17.54 Dry	37.42 45.37	40.11 48.63	4.93 6.00	2.19 2.56	.42 .50	11273 13669	14703
5412	11	8/12	Marshall.....	2	12.92 Dry	41.69 47.87	37.60 43.19	7.78 8.94	2.38 2.73	.64 .73	11597 13319	14836
5413	11	8/12	Marshall.....	2	13.10 Dry	38.73 44.56	39.64 45.61	8.53 9.83	3.47 3.99	.65 .75	11414 13134	14832
5414	11	8/12	Marshall.....	2	13.82 Dry	41.34 47.97	35.88 41.64	8.96 10.39	3.28 3.81	.50 .59	11296 13106	14901
5232	22	7/12	McDonough....	2	19.35 Dry	31.70 39.35	40.61 50.40	8.34 10.35	2.31 2.87	.37 .46	10392 12898	14605
5233	22	7/12	McDonough....	2	16.46 Dry	33.94 40.63	42.46 50.83	7.14 8.54	1.71 2.04	.11 .14	11064 13246	14660
5234	22	7/12	McDonough....	2	16.39 Dry	34.26 40.97	41.36 49.47	7.99 9.56	2.04 2.44	.33 .40	10977 13130	14725
9728	213	11/16	McDonough....	2	14.89 Dry	35.48 41.68	40.75 47.88	8.88 10.44	3.78 4.43	-----	10969 12887	14678
9729	213	11/16	McDonough....	2	16.83 Dry	34.68 41.71	39.79 47.83	8.70 10.46	3.94 4.74	-----	10628 12778	14565
5426	100	8/12	McLean.....	2	10.13 Dry	45.00 50.07	35.92 39.97	8.95 9.96	3.27 3.59	.74 .82	11710 13029	14723
5427	100	8/12	McLean.....	2	11.34 Dry	40.05 45.17	39.18 44.19	9.43 10.64	3.18 3.58	.90 1.01	11394 12851	14643
5428	100	8/12	McLean.....	2	10.61 Dry	41.87 46.84	35.94 40.21	11.58 12.95	3.79 4.24	.92 1.03	11225 12557	14752
5429	100	8/12	McLean.....	2	12.31 Dry	42.17 48.09	38.03 43.37	7.49 8.54	2.69 3.07	.94 1.07	11636 13270	14722
5430	100	8/12	McLean.....	2	12.00 Dry	42.00 47.73	37.96 43.14	8.04 9.13	2.37 2.70	1.23 1.40	11634 13220	14759

<sup>1</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 85, 1913.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatiles	Fixed carbon	Ash				
					Dry	matter						
5433	100	8/12	McLean-----	2	11.27 Dry	42.17 47.53	39.27 44.25	7.29 8.22	2.91 3.28	1.12 1.26	11784 13279	----- 14684
3044	2B. M. 55	3/06	McLean-----	2	10.25 Dry	35.88 39.98	40.11 44.69	13.76 15.33	2.80 3.12	-----	11149 12422	----- 15028
3045	2B. M. 55	3/06	McLean-----	2	9.88 Dry	35.99 39.93	38.22 42.42	15.91 17.65	3.15 3.50	-----	-----	-----
9709	214	11/16	Schuyler-----	2	12.34 Dry	38.11 43.48	42.29 48.24	7.26 8.28	4.32 4.92	-----	11841 13507	----- 15011
9708	214	11/16	Schuyler-----	2	12.73 Dry	37.56 43.04	41.88 47.99	7.83 8.97	4.77 5.46	-----	11621 13316	----- 14924
No. 5 Coal.												
5283	31	8/12	Fulton-----	5	15.18 Dry	37.17 43.82	35.17 41.45	12.48 14.73	3.45 4.07	1.70 2.00	10201 12026	----- 14441
5284	31	8/12	Fulton-----	5	16.94 Dry	35.68 42.95	37.15 44.73	10.23 12.32	2.98 3.59	1.31 1.37	10314 12418	----- 14446
5285	31	8/12	Fulton-----	5	18.42 Dry	34.98 42.88	37.66 46.15	8.94 10.97	2.33 2.85	.86 1.06	10270 12587	----- 14371
5296	31	8/12	Fulton-----	5	16.82 Dry	37.28 44.81	33.45 40.23	12.45 14.96	2.84 3.42	1.69 2.02	10580 12038	----- 14479
5298	31	8/12	Fulton-----	5	16.52 Dry	37.17 44.52	36.54 43.78	9.77 11.70	3.91 4.69	.81 .97	10394 12451	----- 14409
5341	31	8/12	Fulton-----	5	17.37 Dry	35.71 43.22	37.86 45.82	9.06 10.96	2.34 2.83	1.14 1.38	10420 12610	----- 14398
5293	29	8/12	Fulton-----	5	17.13 Dry	36.23 43.72	34.44 41.55	12.20 14.73	3.03 3.66	1.79 2.16	9846 11882	----- 14252
5297	29	8/12	Fulton-----	5	16.59 Dry	35.98 43.14	37.20 44.61	10.23 12.25	4.07 4.88	1.77 2.12	10271 12314	----- 14354
5300	29	8/12	Fulton-----	5	15.41 Dry	35.67 42.16	39.04 46.15	9.88 11.69	3.31 3.92	.52 .61	10579 12505	----- 14443
5292	28	8/12	Fulton-----	5	17.39 Dry	37.00 44.79	35.69 43.20	9.92 12.01	2.74 3.28	1.14 1.36	10273 12435	----- 14416
5295	28	8/12	Fulton-----	5	16.33 Dry	36.27 43.34	36.58 43.72	10.82 12.94	3.40 4.06	1.94 2.32	10246 12247	----- 14371
5299	28	8/12	Fulton-----	5	16.33 Dry	36.75 43.92	38.02 45.44	8.90 10.64	2.59 3.10	1.02 1.22	10604 12674	----- 14421
5342	32	8/12	Fulton-----	5	13.66 Dry	38.46 44.54	37.06 42.92	10.82 12.54	3.64 4.22	1.26 1.46	10689 12379	----- 14462
5343	32	8/12	Fulton-----	5	14.53 Dry	37.46 43.83	38.35 44.87	9.66 11.30	3.18 3.72	1.60 1.87	10804 12641	----- 14525
5344	32	8/12	Fulton-----	5	15.80 Dry	35.84 42.56	37.67 44.74	10.69 12.70	3.00 3.57	1.79 2.12	10460 12423	----- 14520
5345	30	8/12	Fulton-----	5	16.36 Dry	33.91 40.54	38.19 45.66	11.54 13.80	2.93 3.50	1.27 1.51	10186 12179	----- 14431
5346	30	8/12	Fulton-----	5	16.33 Dry	35.50 42.42	37.01 44.23	11.16 13.35	2.89 3.45	1.84 2.20	10220 12213	----- 14389

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5347	30	8/12	Fulton-----	5	15.85 Dry	36.12 42.62	38.12 45.30	9.91 11.78	3.36 4.00	1.47 1.75	10494 12471	----- 14386
12442	110	3/21	Fulton-----	5	15.43 Dry	33.62 39.76	39.47 46.67	11.48 13.57	2.50 3.46	1.41 1.61	10389 12285	----- 14473
12443	111	3/21	Fulton-----	5	14.43 Dry	34.60 40.43	39.09 45.69	11.88 13.88	2.82 3.29	2.45 2.86	10320 12061	----- 14297
12444	111	3/21	Fulton-----	5	15.00 Dry	33.10 38.94	37.31 43.89	14.59 17.17	3.38 3.98	2.86 3.36	9834 11569	----- 14300
12445	111	3/21	Fulton-----	5	14.69 Dry	34.07 39.94	40.18 47.09	11.06 12.97	2.83 3.32	1.75 2.05	10383 12172	----- 14266
12446	111	3/21	Fulton-----	5	14.52 Dry	34.46 40.31	37.64 44.04	13.38 15.65	2.91 3.40	2.74 3.21	10045 11752	----- 14261
12447	111	3/21	Fulton-----	5	14.75 Dry	33.18 38.92	38.89 45.62	13.18 15.46	3.70 4.34	1.54 1.81	9869 11577	----- 14298
12448	111	3/21	Fulton-----	5	14.28 Dry	33.93 40.75	38.76 45.22	12.03 14.03	2.56 2.99	1.98 2.31	10329 12061	----- 14316
12472	112	3/21	Fulton-----	5	15.32 Dry	35.12 41.48	38.05 44.93	11.51 13.59	2.59 3.06	1.41 1.66	10482 12379	----- 14617
12473	112	3/21	Fulton-----	5	15.09 Dry	35.37 41.66	39.41 46.41	10.13 11.93	2.68 3.16	1.79 1.66	10741 12650	----- 14631
12474	112	3/21	Fulton-----	5	15.56 Dry	35.68 42.26	38.92 46.09	9.84 11.65	2.43 2.88	1.33 1.58	10753 12735	----- 14668
12475	112	3/21	Fulton-----	5	14.56 Dry	35.37 41.40	38.98 45.62	11.09 12.98	2.72 3.19	1.38 1.62	10581 12384	----- 14512
12476	112	3/21	Fulton-----	5	15.39 Dry	33.82 39.97	38.77 45.82	12.02 14.21	3.40 4.02	1.67 1.97	10338 12219	----- 14565
12477	112	3/21	Fulton-----	5	15.66 Dry	34.65 41.08	37.56 44.59	12.13 14.38	2.93 3.47	1.88 2.23	10242 12144	----- 14583
12439	113	3/21	Fulton-----	5	13.37 Dry	36.03 41.59	39.03 45.06	11.57 13.35	3.06 3.52	1.46 1.69	10787 12452	----- 14670
12440	113	3/21	Fulton-----	5	14.44 Dry	34.71 40.57	38.58 45.09	12.27 14.34	2.17 2.54	1.80 2.10	10578 12364	----- 14683
12441	113	3/21	Fulton-----	5	14.96 Dry	33.65 39.57	39.96 46.99	11.43 13.44	4.32 5.08	1.11 1.30	10502 12350	----- 14616
12459	114	3/21	Fulton-----	5	14.57 Dry	35.24 41.25	39.58 46.33	10.61 12.42	2.89 3.38	1.00 1.17	10562 12363	----- 14391
12460	114	3/21	Fulton-----	5	16.16 Dry	35.65 42.52	37.89 45.19	10.30 12.29	2.50 2.98	1.56 1.86	10422 12931	----- 14434
12461	114	3/21	Fulton-----	5	13.35 Dry	37.84 43.67	39.86 46.00	8.95 10.33	2.22 2.56	1.77 2.04	10843 12514	----- 14150
12462	114	3/21	Fulton-----	5	15.86 Dry	35.20 41.84	37.32 44.35	11.62 13.81	3.49 4.15	1.31 1.56	10198 12120	----- 14380
12463	114	3/21	Fulton-----	5	14.34 Dry	35.09 40.96	36.72 42.87	13.85 16.17	3.84 4.48	2.47 2.89	9944 11609	----- 14217
12464	114	3/21	Fulton-----	5	14.62 Dry	36.18 42.38	35.21 45.92	9.99 11.70	2.43 2.85	1.49 1.74	10719 12555	----- 14465

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
84406	115	2/22	Fulton	5	15.7 Dry	33.2 39.3	38.7 46.0	12.4 14.7	3.6 4.3	1.57 1.86	10270 12180	----- 14511
84407	115	2/22	Fulton	5	14.8 Dry	33.8 39.7	42.3 49.6	9.1 10.7	2.6 3.1	.75 .88	10950 12860	----- 14649
12436	116	3/21	Fulton	5	15.88 Dry	33.96 40.37	38.75 46.07	11.41 13.56	4.38 5.21	.92 1.10	10330 12280	----- 14569
12437	116	3/21	Fulton	5	16.68 Dry	35.46 42.56	37.90 45.49	9.96 11.95	3.82 4.58	.61 .74	10464 12559	----- 14579
12438	116	3/21	Fulton	5	14.53 Dry	35.68 41.74	38.23 44.73	11.56 13.53	3.45 4.04	1.00 1.17	10608 12411	----- 14679
84408	117	2/22	Fulton	5	13.5 Dry	34.4 39.8	38.8 44.8	13.3 15.4	3.5 4.1	-----	10410 12040	----- 14589
84446	118	3/22	Fulton	5	11.6 Dry	36.4 41.1	40.4 45.7	11.6 13.2	4.1 4.6	.92 1.04	11070 12510	----- 14758
84447	118	3/22	Fulton	5	13.6 Dry	34.7 40.2	41.4 47.9	10.3 11.9	3.3 3.8	.83 .97	10950 12670	----- 14673
84448	118	3/22	Fulton	5	13.1 Dry	34.7 39.9	39.5 45.4	12.7 14.7	4.0 4.7	1.34 1.54	10690 12310	----- 14808
4345	3	12/06	Fulton	5	15.27 Dry	32.91 38.84	11.46 48.93	10.36 12.23	3.01 3.55	-----	-----	-----
4346	3	12/06	Fulton	5	15.67 Dry	31.43 37.28	43.10 51.11	9.80 11.61	2.99 3.55	-----	10620 12593	----- 14518
5025	47	6/12	Gallatin	5	5.37 Dry	36.54 38.62	45.10 47.65	12.99 13.73	3.99 4.22	1.38 1.45	11883 12558	----- 14900
5029	47	6/12	Gallatin	5	5.57 Dry	35.49 37.59	48.53 51.39	10.41 11.02	3.12 3.31	.78 .83	12338 13066	----- 14953
5032	47	6/12	Gallatin	5	6.21 Dry	35.29 37.61	46.49 49.57	12.02 12.82	3.30 3.52	.87 .93	11938 12728	----- 14903
5492	-----	8/12	Gallatin	5	4.20 Dry	34.41 35.92	52.63 51.92	8.76 9.16	2.85 2.97	.01 .01	12997 13566	----- 15164
5493	-----	8/12	Gallatin	5	4.07 Dry	33.99 35.43	52.96 55.21	8.98 9.36	3.61 3.76	.03 .03	12975 13526	----- 15186
5512	-----	8/12	Gallatin	5	3.68 Dry	37.83 39.26	48.18 50.02	10.32 10.72	4.55 4.73	.04 .04	12818 13307	----- 15078
5521	-----	8/12	Gallatin	5	3.94 Dry	38.13 39.70	45.95 47.82	11.98 12.48	3.53 3.67	.03 .03	12449 12958	----- 15117
5522	-----	8/12	Gallatin	4	7.15 Dry	34.34 36.99	53.32 57.42	5.19 5.59	.84 .90	.03 .03	13035 14038	----- 14970
5523	-----	8/12	Gallatin	-----	4.73 Dry	33.91 35.59	48.65 52.12	11.71 12.29	4.78 5.02	.04 .04	12429 13045	----- 15240
5530	-----	8/12	Gallatin	-----	4.03 Dry	33.71 35.13	51.84 54.01	10.41 10.86	4.19 4.37	.02 .02	12783 13319	----- 15256
12640	135	7/21	Gallatin	5	4.37 Dry	34.39 35.96	49.23 51.48	12.01 12.56	3.85 4.03	.35 .37	12270 12631	----- 14995

<sup>3</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 85, 1913.<sup>4</sup> This and the two following samples are from the "Ice House" coal of Kentucky reports.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
12941	135	7/21	Gallatin.....	5	4.04 Dry	35.68 37.18	50.92 53.06	9.36 9.76	3.23 3.37	.24 .24	12828 13200	----- 15066
12942	135	7/21	Gallatin.....	5	3.49 Dry	36.09 37.39	50.54 52.37	9.88 10.24	3.04 3.15	.18 .18	12707 13162	----- 14912
23425	<sup>5</sup> B. M. 4	11/15	Gallatin.....	5	3.93 Dry	36.82 38.33	51.04 53.12	8.21 8.55	2.80 2.91	----- -----	13106 13642	----- 15134
5391	-----	8/12	LaSalle.....	5	15.52 Dry	41.56 49.18	32.57 38.55	10.35 12.27	4.08 4.83	.27 .34	10425 12400	----- 14384
5392	-----	8/12	LaSalle.....	5	14.13 Dry	39.42 45.90	35.96 41.89	10.49 12.21	3.22 3.75	.96 1.12	10636 12387	----- 14393
5393	-----	8/12	LaSalle.....	5	14.64 Dry	43.01 50.38	34.25 40.12	8.10 9.50	2.83 3.32	.56 .66	10961 12841	----- 14415
10519	215	8/18	Livingston.....	5	10.22 Dry	36.56 40.72	42.14 46.94	11.08 12.34	3.09 3.44	----- -----	11630 12955	----- 15077
10523	215	8/18	Livingston.....	5	10.05 Dry	32.49 38.12	37.59 41.80	19.87 22.08	7.61 8.46	----- -----	10125 11256	----- 15151
10524	215	8/18	Livingston.....	5	7.95 Dry	38.03 41.31	43.55 47.31	10.47 11.38	3.52 3.82	----- -----	12020 13057	----- 15026
10520	216	8/18	Livingston.....	5	13.23 Dry	36.90 41.71	39.16 45.13	11.42 13.16	1.46 1.69	----- -----	10924 12550	----- 14738
10521	216	8/18	Livingston.....	5	14.03 Dry	36.36 42.29	39.69 46.17	9.92 11.54	2.74 3.18	----- -----	11124 12939	----- 14899
10522	216	8/18	Livingston.....	5	14.04 Dry	34.76 40.44	38.03 44.24	13.17 15.32	5.25 6.11	----- -----	10502 12216	----- 14871
5263	33	8/12	Logan.....	5	14.64 Dry	37.87 44.36	35.56 41.66	11.93 13.98	3.60 4.22	1.10 1.28	10400 12183	----- 14497
5264	33	8/12	Logan.....	5	13.98 Dry	36.86 42.84	37.98 44.16	11.18 13.00	3.14 3.65	1.43 1.67	10549 12264	----- 14391
5265	33	8/12	Logan.....	5	13.99 Dry	36.85 42.85	38.17 44.37	10.99 12.78	3.26 3.79	1.32 1.53	10519 12230	----- 14313
81591	109	9/21	Logan.....	5	14.36 Dry	35.36 41.29	39.95 46.65	10.33 12.06	2.73 3.19	1.20 1.40	10730 12599	----- 14595
81592	109	9/21	Logan.....	5	13.70 Dry	35.46 41.09	40.38 46.79	10.46 12.12	3.38 3.92	1.11 1.29	10813 12530	----- 14553
81593	109	9/21	Logan.....	5	12.55 Dry	35.93 41.09	42.13 48.17	9.39 10.74	2.76 2.16	.84 .96	11169 12772	----- 14643
2881	<sup>6</sup> B. M. 37	2/06	Logan.....	5	14.77 Dry	32.90 38.60	39.75 46.64	12.58 14.76	3.95 4.63	----- -----	10406 12209	----- 14687
2882	<sup>6</sup> B. M. 37	2/06	Logan.....	5	15.52 Dry	32.27 38.20	39.86 47.18	12.35 14.62	3.65 4.32	----- -----	----- -----	----- -----
3003	<sup>6</sup> B. M. 37	2/06	Logan.....	5	15.68 Dry	32.41 38.44	39.82 47.22	12.09 14.34	3.51 4.16	----- -----	10337 12260	----- 14656
5200	42	7/12	Macon.....	5	13.52 Dry	36.72 42.46	39.66 45.86	10.10 11.68	4.23 4.95	.09 .11	10646 12443	----- 14405

<sup>5</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 123, p. 34, 1918.<sup>6</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 85, 1913.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5201	42	7/12	Macon.....	5	13. 62 Dry	37. 72 43. 68	40. 34 46. 70	8. 32 9. 62	3. 39 3. 93	.00 .00	11046 12788	----- 14403
5202	42	7/12	Macon.....	5	14. 36 Dry	38. 06 43. 88	39. 35 45. 37	9. 33 10. 75	3. 87 4. 46	.19 .22	10963 12638	----- 14447
5244	41	7/12	Macon.....	5	14. 76 Dry	35. 46 41. 60	38. 08 44. 67	11. 70 13. 73	3. 24 3. 81	.90 1. 06	10390 12189	----- 14443
5245	41	7/12	Macon.....	5	14. 54 Dry	36. 33 42. 51	38. 01 44. 47	11. 12 13. 01	3. 47 4. 06	.68 .79	10465 12244	----- 14385
5346	41	7/12	Macon.....	5	14. 14 Dry	36. 21 42. 18	38. 07 44. 34	11. 58 13. 48	3. 24 3. 77	1. 12 1. 31	10493 12210	----- 14433
81595	123	9/21	Macon.....	5	13. 10 Dry	34. 64 39. 86	43. 36 49. 90	8. 90 10. 24	2. 73 3. 14	.21 .24	10934 12582	----- 14247
81596	123	9/21	Macon.....	5	12. 67 Dry	35. 75 40. 94	43. 08 49. 33	8. 50 9. 73	3. 32 3. 80	.03 .03	11103 12714	----- 14331
81597	123	9/21	Macon.....	5	12. 71 Dry	35. 98 41. 22	42. 79 49. 02	8. 52 9. 76	3. 66 4. 19	.17 .19	11093 12708	----- 14338
5190	34	8/12	Menard.....	5	16. 29 Dry	36. 66 43. 80	38. 73 46. 26	8. 32 9. 94	3. 65 4. 36	.59 .71	10747 12838	----- 14528
5191	34	7/12	Menard.....	5	15. 44 Dry	36. 38 43. 03	39. 71 46. 96	8. 47 10. 01	3. 34 3. 95	.26 .31	10841 12820	----- 14505
5192	34	7/12	Menard.....	5	20. 27 Dry	34. 58 43. 37	37. 43 46. 94	7. 72 9. 69	3. 31 4. 16	.63 .79	9919 12441	----- 14402
5431	100	8/12	McLean.....	5	12. 88 Dry	38. 84 44. 58	35. 80 41. 09	12. 48 14. 33	3. 60 4. 14	1. 17 1. 35	10601 12168	----- 14544
5432	100	8/12	McLean.....	5	13. 34 Dry	38. 39 44. 30	36. 72 42. 37	11. 55 13. 33	3. 59 4. 14	1. 31 1. 51	10743 12397	----- 14629
5434	100	8/12	McLean.....	5	13. 73 Dry	36. 79 42. 64	36. 14 41. 83	13. 34 15. 47	3. 99 4. 62	1. 19 1. 30	10399 12054	----- 14639
5289	25	8/12	Peoria.....	5	14. 23 Dry	36. 65 42. 73	37. 04 43. 18	12. 08 14. 09	3. 39 3. 96	1. 55 1. 81	10483 12220	----- 14553
5290	25	8/12	Peoria.....	5	14. 54 Dry	37. 41 43. 77	37. 32 43. 67	10. 73 12. 56	3. 27 3. 82	1. 18 1. 38	10705 12526	----- 14625
5291	25	8/12	Peoria.....	5	16. 00 Dry	36. 46 43. 41	37. 28 44. 38	10. 26 12. 21	3. 65 4. 35	.90 1. 07	10583 12598	----- 14664
5303	26	8/12	Peoria.....	5	16. 00 Dry	36. 06 42. 93	37. 54 44. 69	10. 40 12. 38	2. 90 3. 46	1. 27 1. 51	10515 12518	----- 14773
5304	26	8/12	Peoria.....	5	14. 23 Dry	37. 41 43. 62	37. 36 43. 56	11. 00 12. 82	3. 14 3. 66	2. 17 2. 53	10573 12327	----- 14433
5305	26	8/12	Peoria.....	5	14. 76 Dry	35. 95 42. 18	35. 34 41. 46	13. 95 16. 36	3. 19 3. 74	2. 00 2. 34	10173 11935	----- 14636
84560	106	3/22	Peoria.....	5	13. 5 Dry	30. 7 35. 5	45. 5 52. 6	10. 3 11. 9	3. 2 3. 7	.86 1. 0	10900 12600	----- 14586
84561	106	3/22	Peoria.....	5	15. 1 Dry	29. 7 35. 0	45. 8 53. 9	9. 4 11. 1	3. 6 4. 3	.43 .50	10870 12800	----- 14693
84562	106	3/22	Peoria.....	5	11. 6 Dry	30. 6 34. 6	43. 1 48. 8	14. 7 16. 6	4. 6 5. 2	1. 86 2. 11	10540 11930	----- 14733



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
84230	107	3/22	Peoria.....	5	13.0 Dry	35.4 40.6	40.9 47.1	10.7 12.3	3.0 3.4	1.91 2.19	10830 12450	----- 14474
84231	107	3/22	Peoria.....	5	14.9 Dry	33.5 39.3	39.1 46.0	12.5 14.7	3.0 3.5	2.17 2.55	10450 12280	----- 14728
84232	107	3/22	Peoria.....	5	14.4 Dry	34.8 40.6	39.9 46.7	10.9 12.7	2.9 3.3	1.23 1.43	10740 12540	----- 14651
21032	7B. M. 2	2/15	Peoria.....	5	15.66 Dry	34.74 41.19	40.38 47.88	9.22 10.93	2.64 3.13	-----	10798 12803	----- 14804
21033	7B. M. 2	2/15	Peoria.....	5	15.38 Dry	34.51 40.78	39.48 46.66	10.63 12.56	2.75 3.25	-----	10645 12580	----- 14671
21034	7B. M. 2	2/15	Peoria.....	5	15.34 Dry	34.25 40.46	40.80 48.19	9.61 11.35	3.11 3.67	-----	10741 12686	----- 14584
21035	7B. M. 2	2/15	Peoria.....	5	15.44 Dry	34.72 41.06	39.81 47.08	10.03 11.86	2.85 3.37	-----	10744 12706	----- 14691
22982	7B. M. 3	10/15	Peoria.....	5	15.03 Dry	34.56 40.67	39.05 45.96	11.36 13.37	2.64 3.11	-----	10490 12346	----- 14538
22983	7B. M. 3	10/15	Peoria.....	5	15.41 Dry	33.87 40.04	38.85 45.93	11.87 14.03	2.88 3.40	-----	10386 12278	----- 14593
22984	7B. M. 3	10/15	Peoria.....	5	15.51 Dry	34.77 41.15	38.69 45.79	11.03 13.06	2.62 3.10	-----	10489 12415	----- 14562
22985	7B. M. 3	10/15	Peoria.....	5	15.57 Dry	34.08 40.36	38.18 45.23	12.17 14.41	3.42 4.05	-----	10283 12179	----- 14566
22986	7B. M. 3	10/15	Peoria.....	5	15.41 Dry	34.34 40.60	38.52 45.53	11.73 13.87	2.97 3.51	-----	10422 12321	----- 14618
4985	43	6/12	Saline.....	5	6.34 Dry	37.72 40.27	48.20 51.46	7.74 8.27	2.03 2.16	.61 .65	12620 13474	----- 14869
4986	43	6/12	Saline.....	5	6.40 Dry	37.11 39.65	49.59 52.97	6.90 7.38	2.27 2.43	.40 .43	12678 13546	----- 14800
4987	43	6/12	Saline.....	5	8.85 Dry	32.53 35.65	51.52 56.57	7.10 7.78	.92 1.00	.66 .72	12321 13502	----- 14774
4989	43	6/12	Saline.....	5	6.80 Dry	35.06 37.61	50.39 54.07	7.75 8.32	2.30 2.46	.03 .03	12514 13428	----- 14853
4990	43	6/12	Saline.....	5	6.02 Dry	38.23 40.68	47.53 50.58	8.22 8.74	2.67 2.84	.45 .48	12538 13341	----- 14831
4992	43	6/12	Saline.....	5	7.39 Dry	35.38 38.20	50.73 54.78	6.50 7.02	2.15 2.32	.01 .01	12642 13650	----- 14848
4991	44	6/12	Saline.....	5	6.49 Dry	35.85 38.34	50.46 53.97	7.20 7.69	2.82 3.02	.01 .01	12634 13511	----- 14841
4993	44	6/12	Saline.....	5	6.71 Dry	35.68 38.24	49.64 53.21	7.97 8.55	2.69 2.88	.00 .00	12482 13379	----- 14839
4994	44	6/12	Saline.....	5	6.90 Dry	34.42 36.97	48.55 52.16	10.13 10.87	2.16 2.32	.03 .03	12088 12984	----- 14793

<sup>7</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 123, p. 35, 1918.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
4997	45	6/12	Saline.....	5	6.71 Dry	35.59 38.14	49.98 53.59	7.72 8.27	2.38 2.55	.14 .16	12092 13332	----- 14725
4909	45	6/12	Saline.....	5	7.45 Dry	34.18 36.94	49.88 53.90	8.49 9.16	2.78 3.01	.01 .01	12336 13329	----- 14301
5001	45	6/12	Saline.....	5	6.94 Dry	34.56 37.14	50.93 54.72	7.57 8.14	2.30 2.46	.16 .18	12485 13415	----- 14792
995	48	6/12	Saline.....	5	7.57 Dry	34.36 37.18	48.30 52.25	9.77 10.57	2.42 2.62	1.75 1.89	11956 12934	----- 14662
5002	48	6/12	Saline.....	5	7.45 Dry	33.71 36.42	51.27 55.40	7.57 8.18	2.63 2.84	.31 .35	12400 13398	----- 14794
5010	48	6/12	Saline.....	5	7.99 Dry	33.63 36.55	51.20 55.65	7.18 7.80	2.61 2.84	.05 .05	12346 13419	----- 14732
5012	49	6/12	Saline.....	5	5.19 Dry	38.37 40.47	45.92 48.43	10.52 11.10	4.06 4.28	.46 .49	12260 12932	----- 14847
5015	49	6/12	Saline.....	5	5.52 Dry	36.89 39.04	45.89 48.58	11.70 12.38	4.97 5.26	.72 .76	11962 12662	----- 14809
5016	49	6/12	Saline.....	5	4.90 Dry	38.93 40.94	45.90 48.26	10.27 10.80	4.77 5.01	.47 .49	12355 12991	----- 14815
5019	46	6/12	Saline.....	5	8.08 Dry	35.26 38.35	48.25 52.50	8.41 9.15	2.60 2.83	.38 .41	12192 13263	----- 14818
5020	46	6/12	Saline.....	5	7.70 Dry	35.48 38.44	48.66 52.72	8.16 8.84	2.52 2.74	.32 .36	12304 13331	----- 14833
5021	46	6/12	Saline.....	5	8.25 Dry	34.98 38.12	47.73 52.03	9.04 9.85	2.40 2.61	.85 .92	11964 13040	----- 14684
5022	46	6/12	Saline.....	5	7.72 Dry	34.09 36.94	49.22 53.34	8.97 9.72	3.31 3.58	.23 .25	12050 13057	----- 14716
5023	46	6/12	Saline.....	5	8.14 Dry	34.60 37.66	48.10 52.36	9.16 9.98	2.42 2.64	.74 .80	11989 13051	----- 14717
5024	46	6/12	Saline.....	5	7.85 Dry	33.72 36.59	49.30 53.50	9.13 9.91	3.48 3.78	.24 .26	11971 12990	----- 14676
12931	124	7/21	Saline.....	5	7.10 Dry	33.34 35.93	51.33 55.30	8.14 8.77	2.58 2.78	.13 .14	12354 13313	----- 14798
12932	124	7/21	Saline.....	5	6.78 Dry	33.62 36.07	51.96 55.74	7.64 8.19	2.40 2.58	.11 .11	12490 13399	----- 14788
12933	124	7/21	Saline.....	5	6.62 Dry	32.79 35.11	52.27 55.98	8.32 8.91	1.74 1.86	.42 .45	12463 13347	----- 14832
12934	125	7/21	Saline.....	5	6.65 Dry	33.52 35.91	52.48 56.22	7.35 7.87	1.93 2.07	.13 .13	12609 13507	----- 14834
12935	125	7/21	Saline.....	5	6.28 Dry	33.35 35.58	51.48 54.93	8.89 9.49	3.07 3.28	.09 .09	12357 13185	----- 14805
12936	125	7/21	Saline.....	5	6.85 Dry	33.65 36.13	52.28 56.12	7.22 7.75	2.11 2.27	.05 .05	12612 13539	----- 14854
12937	126	7/21	Saline.....	5	5.75 Dry	33.90 35.97	53.21 56.46	7.14 7.57	2.29 2.43	.04 .04	12624 13394	----- 14668
12938	126	7/21	Saline.....	5	6.13 Dry	34.28 36.52	51.83 55.22	7.76 8.26	2.75 2.60	.27 .29	12615 13439	----- 14830

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
12939	126	7/21	Saline.....	5	6.18 Dry	33.97 36.21	51.99 55.42	7.86 8.37	2.65 2.82	.16 .17	12508 13191	----- 14753
12901	127	7/21	Saline.....	5	5.51 Dry	33.34 35.28	53.39 56.51	7.76 8.21	1.92 2.03	.34 .36	12687 13427	----- 14771
12902	127	7/21	Saline.....	5	6.05 Dry	34.38 36.59	51.87 55.21	7.70 8.20	1.98 2.11	.42 .44	12580 13390	----- 14765
12903	127	7/21	Saline.....	5	5.50 Dry	33.64 35.60	52.49 55.54	8.37 8.86	2.51 2.66	.51 .54	12376 13308	----- 14806
12911	128	7/21	Saline.....	5	6.52 Dry	33.57 35.91	52.37 56.02	7.54 8.07	2.57 2.75	.03 .03	12552 13428	----- 14805
12912	128	7/21	Saline.....	5	6.84 Dry	30.30 32.52	48.02 51.55	14.84 15.93	1.46 1.57	.03 .03	11343 12176	----- 14764
12913	128	7/21	Saline.....	5	6.17 Dry	32.87 35.03	53.54 57.06	7.42 7.91	1.60 1.71	.13 .14	12631 13462	----- 14777
12917	129	7/21	Saline.....	5	5.62 Dry	34.61 36.67	52.52 55.65	7.25 7.68	2.02 2.14	.08 .09	12781 13542	----- 14840
12918	129	7/21	Saline.....	5	5.75 Dry	35.01 37.15	52.65 55.86	6.59 6.99	2.05 2.18	.05 .05	12800 13581	----- 14927
12919	129	7/21	Saline.....	5	6.58 Dry	32.89 35.21	53.29 57.14	7.24 7.75	2.06 2.20	.14 .15	12565 13450	----- 14754
12914	130	7/21	Saline.....	5	6.05 Dry	33.67 35.84	51.48 54.79	8.80 9.37	2.72 2.90	.34 .35	12401 13200	----- 14786
12915	130	7/21	Saline.....	5	6.69 Dry	32.54 34.88	51.44 55.13	9.33 9.99	2.62 2.81	.06 .07	12225 13101	----- 14785
12916	130	7/21	Saline.....	5	5.93 Dry	33.79 35.92	51.51 54.76	8.77 9.32	2.63 2.80	.10 .11	12393 13774	----- 14746
5494	131	8/12	Saline.....	5	3.72 Dry	34.44 35.77	52.91 54.96	8.93 9.27	3.76 3.90	.03 .03	13032 13535	----- 15186
5530	132	8/12	Saline.....	5	4.03 Dry	33.71 35.13	51.84 54.01	10.42 10.86	4.19 4.37	.02 .02	12783 13319	----- 15255
5529	133	8/12	Saline.....	5	3.40 Dry	33.33 34.50	55.18 57.12	8.09 8.38	4.25 4.40	.03 .03	13401 13872	----- 15420
4413	<sup>8</sup> B. M. 5	1/07	Saline.....	5	7.55 Dry	33.85 36.61	51.45 55.66	7.15 7.73	1.56 1.69	-----	-----	-----
4414	<sup>8</sup> B. M. 5	1/07	Saline.....	5	7.51 Dry	32.81 35.47	52.20 56.44	7.48 8.09	1.58 1.71	-----	12686 13716	----- 15090
7420	<sup>8</sup> B. M. 5	1/07	Saline.....	5	6.98 Dry	31.64 34.01	53.41 57.42	7.97 8.57	-----	-----	-----	-----
7421	<sup>8</sup> B. M. 5	1/07	Saline.....	5	7.40 Dry	31.28 33.78	54.74 59.11	6.58 7.11	-----	-----	-----	-----
4622	<sup>8</sup> B. M. 5	1/07	Saline.....	5	7.81 Dry	33.54 36.38	50.27 54.53	8.38 9.09	2.36 2.56	-----	12418 13469	----- 15552
4636	<sup>8</sup> B. M. 5	1/07	Saline.....	5	9.33 Dry	30.92 34.10	47.86 52.79	11.89 13.11	2.76 3.04	-----	11572 12764	----- 14984

<sup>8</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 90, 1913.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
7501	<sup>8</sup> B. M. 6	3/09	Saline-----	5	6.01 Dry	32.37 34.44	54.32 57.79	7.30 7.77	1.66 1.77	----- -----	12793 13610	----- 14916
7502	<sup>8</sup> B. M. 6	3/09	Saline-----	5	5.56 Dry	34.41 36.44	51.31 54.33	8.72 9.23	2.87 3.04	----- -----	12643 13386	----- 15324
12794	<sup>9</sup> B. M. 7	8/11	Saline-----	5	7.12 Dry	34.55 37.20	50.68 54.56	7.65 8.24	2.23 2.40	----- -----	12481 13439	----- 14835
12795	<sup>9</sup> B. M. 7	8/11	Saline-----	5	7.02 Dry	34.58 37.19	51.46 55.35	6.94 7.46	2.07 2.23	----- -----	12640 13594	----- 14862
28448	<sup>10</sup> B. M. 8	7/17	Saline-----	5	4.73 Dry	37.88 39.76	47.70 50.07	9.69 10.17	4.13 4.33	----- -----	12463 13081	----- 14844
28449	<sup>10</sup> B. M. 8	7/17	Saline-----	5	4.94 Dry	39.50 41.55	45.79 48.17	9.77 10.28	3.94 4.14	----- -----	12420 13066	----- 14840
1704	<sup>11</sup> B. M. 41	6/05	Sangamon-----	5	13.89 Dry	33.96 39.43	40.89 47.49	11.26 13.08	3.83 4.45	----- -----	10636 12352	----- 14543
1705	<sup>11</sup> B. M. 41	6/05	Sangamon-----	5	14.45 Dry	34.79 40.67	40.10 46.87	10.66 12.46	3.46 4.04	----- -----	----- -----	----- -----
1740	<sup>11</sup> B. M. 41	6/05	Sangamon-----	5	12.77 Dry	34.68 39.76	40.77 46.74	11.78 13.50	4.16 4.77	----- -----	10757 12332	----- 13395
5118	36	7/12	Sangamon-----	5	16.05 Dry	35.82 42.66	37.14 44.25	10.99 13.09	3.55 4.22	.67 .80	10330 12306	----- 14476
5119	36	7/12	Sangamon-----	5	15.53 Dry	36.36 43.04	38.05 45.05	10.06 11.91	3.86 4.57	.55 .66	10522 12457	----- 14450
5120	36	7/12	Sangamon-----	5	14.45 Dry	37.46 43.79	38.27 44.73	9.82 11.48	3.59 4.19	.55 .65	10704 12512	----- 14423
5128	37	7/12	Sangamon-----	5	14.08 Dry	37.38 43.51	37.56 43.71	10.98 12.78	3.97 5.17	.38 .49	9471 12337	----- 14492
5129	37	7/12	Sangamon-----	5	13.86 Dry	37.11 43.08	39.05 45.34	9.98 11.58	2.57 4.07	.52 .61	10726 12451	----- 14365
5166	39	7/12	Sangamon-----	5	13.38 Dry	37.20 42.95	36.40 42.03	13.01 15.02	4.78 5.52	.96 1.10	10338 11934	----- 14439
5167	39	7/12	Sangamon-----	5	13.35 Dry	36.64 42.27	37.12 42.85	12.89 14.88	4.80 5.53	.84 .97	10348 11942	----- 14423
5168	39	7/12	Sangamon-----	5	13.19 Dry	38.44 44.28	36.47 42.00	11.90 13.72	4.61 5.31	1.05 1.20	10513 12110	----- 14397
5187	40	7/12	Sangamon-----	5	14.82 Dry	37.18 43.65	38.22 44.87	9.78 11.48	4.30 4.52	.72 .84	10683 12541	----- 14483
5188	40	7/12	Sangamon-----	5	16.05 Dry	35.58 42.38	38.04 45.32	10.33 12.30	4.18 4.98	.17 .20	10413 12404	----- 14476
5189	40	7/12	Sangamon-----	5	14.31 Dry	37.31 43.54	38.20 44.58	10.18 11.88	4.21 4.91	.90 1.05	10655 12434	----- 14251
5196	38	7/12	Sangamon-----	5	14.25 Dry	37.25 43.44	37.07 43.24	11.43 13.32	4.76 5.55	.98 1.15	10414 12147	----- 14381
5197	38	7/12	Sangamon-----	5	14.10 Dry	38.74 45.09	37.66 43.85	9.50 11.06	3.86 4.50	.75 .87	10790 12564	----- 14415

<sup>9</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 85, p. 37, 1914.<sup>10</sup> U. S. Bureau of Mines, unpublished analyses.<sup>11</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 91, 1913.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5198	38	7/12	Sangamon-----	5	14.44 Dry	38.22 44.67	37.68 44.04	9.66 11.29	3.79 4.43	.63 .73	10746 12549	----- 14435
5199	38	7/12	Sangamon-----	5	14.08 Dry	38.05 44.28	35.30 41.09	12.57 14.63	5.87 6.83	.60 .69	10228 11903	----- 14366
81448	119	9/21	Sangamon-----	5	13.79 Dry	34.86 40.44	39.58 45.91	11.77 13.65	3.88 4.50	.58 .67	10576 12268	----- 14546
81449	119	9/21	Sangamon-----	5	14.78 Dry	35.20 41.30	39.74 46.64	10.28 12.06	3.72 4.37	.33 .39	10606 12445	----- 14454
81450	119	9/21	Sangamon-----	5	13.62 Dry	37.50 43.41	39.30 45.50	9.58 11.09	3.62 4.06	.39 .45	10876 12591	----- 14439
81452	120	9/21	Sangamon-----	5	13.19 Dry	36.95 42.56	41.18 47.44	8.68 10.00	3.65 4.20	.44 .51	11120 12810	----- 14381
81453	120	9/21	Sangamon-----	5	13.75 Dry	37.20 43.13	37.60 43.59	11.45 13.28	4.38 5.08	1.09 1.26	10567 12252	----- 14478
81454	120	9/21	Sangamon-----	5	13.64 Dry	36.29 42.17	38.94 45.25	10.83 12.58	3.76 4.37	.85 .99	10672 12401	----- 14499
81456	121	9/21	Sangamon-----	5	13.26 Dry	34.27 39.51	41.93 48.34	10.54 12.15	3.71 4.28	.16 .18	10824 12479	----- 14509
81457	121	9/21	Sangamon-----	5	14.14 Dry	35.08 40.86	40.61 47.30	10.17 11.84	3.87 4.51	.67 .78	10709 12473	----- 14453
81458	121	9/21	Sangamon-----	5	14.79 Dry	34.30 40.25	40.77 47.85	10.14 11.90	3.68 4.32	.53 .62	10691 12547	----- 14544
81440	122	9/21	Sangamon-----	5	13.09 Dry	36.51 42.01	41.14 47.34	9.26 10.65	3.77 4.34	.70 .81	10935 12582	----- 14609
81441	122	9/21	Sangamon-----	5	12.76 Dry	35.36 40.53	41.92 48.05	9.96 11.42	3.98 4.56	.82 .94	10907 12502	----- 14411
81442	122	9/21	Sangamon-----	5	13.62 Dry	35.00 40.52	40.80 47.23	10.58 12.25	3.95 4.57	.35 .41	10594 12264	----- 14282
81311	217	9/21	Shelby-----	5	12.10 Dry	35.78 40.71	40.71 46.31	11.41 12.98	3.46 3.94	.78 .89	10807 12295	----- 14506
81312	217	9/21	Shelby-----	5	10.42 Dry	36.85 41.14	42.83 47.81	9.90 11.05	3.48 3.88	.23 .26	11335 12653	----- 14499
81313	217	9/21	Shelby-----	5	10.71 Dry	37.16 41.62	40.91 45.81	11.22 12.57	4.16 4.66	.56 .64	11099 12330	----- 14701
5277	27	7/12	Tazewell-----	5	14.71 Dry	37.46 44.06	38.57 44.03	10.26 11.91	3.51 4.07	1.15 1.33	10801 12516	----- 14500
5278	27	7/12	Tazewell-----	5	13.88 Dry	37.58 43.64	40.01 46.45	8.53 9.91	2.55 2.96	.95 1.10	11076 12860	----- 14499
5281	27	8/12	Tazewell-----	5	15.56 Dry	37.60 44.53	36.70 43.46	10.14 12.01	3.23 3.83	1.50 1.78	10552 12496	----- 14488
84483	108	3/22	Tazewell-----	5	15.4 Dry	35.1 41.5	40.4 47.8	9.1 10.7	2.6 3.0	1.26 1.49	10720 12670	----- 14261
84484	108	3/22	Tazewell-----	5	16.5 Dry	32.8 39.3	41.6 49.8	9.1 10.9	3.1 3.7	.57 .68	10590 12690	----- 14508
84485	108	3/22	Tazewell-----	5	15.4 Dry	35.2 41.6	39.8 47.1	9.6 11.3	4.2 5.0	.42 .50	10670 12610	----- 15524



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
No. 6 Coal.												
80788	218	8/21	Bond-----	6	11.69 Dry	34.15 38.67	43.22 48.94	10.94 12.39	3.55 4.02	.80 .91	10784 12212	----- 14229
80789	218	8/21	Bond-----	6	12.55 Dry	35.58 40.69	41.60 47.57	10.27 11.74	3.51 4.01	.41 .47	10745 12287	----- 14199
80790	218	8/21	Bond-----	6	11.64 Dry	35.55 40.23	42.12 47.67	10.69 12.10	3.09 3.50	.79 .89	10890 12325	----- 14254
81315	219	9/21	Christian-----	6	11.96 Dry	36.12 41.03	42.08 47.79	9.84 11.18	3.31 3.76	.21 .24	10989 12482	----- 14318
81316	219	9/21	Christian-----	6	11.74 Dry	37.52 42.51	37.67 42.68	13.07 14.81	5.23 5.93	.39 .44	10482 11876	----- 14706
81317	219	9/21	Christian-----	6	12.30 Dry	38.02 43.35	39.56 45.11	10.12 11.54	3.03 3.45	.76 .87	10824 12456	----- 14343
81444	220	9/21	Christian-----	6	13.34 Dry	36.44 42.05	39.03 45.04	11.19 12.91	3.63 4.19	.77 .89	10679 12323	----- 14382
81445	220	9/21	Christian-----	6	13.67 Dry	35.65 41.30	39.60 45.87	11.08 12.83	4.17 4.83	.57 .66	10622 12304	----- 14448
81446	220	9/21	Christian-----	6	14.74 Dry	37.10 43.51	39.34 46.15	8.82 10.34	4.20 4.93	.30 .35	10745 12603	----- 14649
81138	221	8/21	Christian-----	6	11.12 Dry	37.81 42.54	41.16 46.31	9.91 11.15	4.15 4.67	.17 .19	11070 12455	----- 14311
81139	221	8/21	Christian-----	6	12.21 Dry	37.30 42.49	40.87 46.55	9.62 10.96	4.08 4.65	.05 .06	10951 12474	----- 14299
81140	221	8/21	Christian-----	6	12.81 Dry	36.18 41.50	39.79 45.63	11.22 12.87	4.28 4.91	.46 .53	10642 12206	----- 14340
81142	222	8/21	Christian-----	6	12.27 Dry	37.17 42.37	40.67 46.36	9.89 11.27	3.49 3.98	.08 .09	10917 12444	----- 14298
81143	222	8/21	Christian-----	6	11.75 Dry	37.46 42.45	41.33 46.83	9.46 10.72	4.38 4.96	.23 .26	11089 12565	----- 14372
81144	222	8/21	Christian-----	6	12.31 Dry	38.31 43.69	41.22 47.00	8.16 9.31	3.27 3.73	.04 .05	11124 12686	----- 13083
25748	<sup>12</sup> B. M. 56	9/16	Christian-----	6	13.62 Dry	37.60 43.53	39.62 45.87	9.16 10.60	3.78 4.38	-----	11020 12757	----- 14553
25749	<sup>12</sup> B. M. 56	9/16	Christian-----	6	13.72 Dry	37.42 43.37	39.05 45.26	9.81 11.37	4.11 4.76	-----	10847 12571	----- 14490
25750	<sup>12</sup> B. M. 56	9/16	Christian-----	6	12.52 Dry	34.74 39.71	39.06 44.65	13.68 15.64	3.40 3.89	-----	10386 11873	----- 14245
25751	<sup>12</sup> B. M. 56	9/16	Christian-----	6	12.31 Dry	38.59 44.00	39.15 44.65	9.95 11.35	3.54 4.04	-----	11086 12641	----- 14544
26336	<sup>12</sup> B. M. 56	11/16	Christian-----	6	11.89 Dry	37.14 42.15	40.58 46.06	10.39 11.79	3.88 4.40	-----	11056 12548	----- 14529
26337	<sup>12</sup> B. M. 56	11/16	Christian-----	6	11.98 Dry	38.52 43.76	39.18 44.72	10.32 11.72	4.21 4.78	-----	11120 12634	----- 14293

<sup>12</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 193, p. 30, 1922.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5052	85	8/12	Clinton-----	6	12.60 Dry	36.78 42.07	40.48 46.32	10.14 11.61	2.88 3.29	.77 .88	10827 12388	----- 14269
5053	85	7/12	Clinton-----	6	12.15 Dry	37.74 42.96	40.52 46.13	9.59 10.91	3.51 3.99	.29 .33	10949 12464	----- 14256
5054	85	7/12	Clinton-----	6	12.43 Dry	37.23 41.28	39.93 46.84	10.41 11.88	4.19 4.79	.38 .44	10730 12253	----- 14211
5073	84	7/12	Clinton-----	6	13.32 Dry	37.43 43.18	39.02 45.02	10.23 11.80	4.06 4.68	.69 .80	10726 12374	----- 14336
5074	84	7/12	Clinton-----	6	12.40 Dry	37.94 43.32	39.04 44.56	10.62 12.12	4.24 4.84	.58 .69	10796 12323	----- 14380
80744	198	8/21	Clinton-----	6	11.78 Dry	36.43 41.29	40.93 46.40	10.86 12.31	4.22 4.78	.61 .73	10771 12209	----- 14234
80745	198	8/21	Clinton-----	6	11.40 Dry	36.59 41.30	41.07 46.35	10.94 12.35	3.74 4.22	.62 .70	10817 12209	----- 14887
80746	198	8/21	Clinton-----	6	10.11 Dry	37.97 42.24	41.14 45.77	10.78 11.99	2.58 2.87	.60 .67	11064 12308	----- 14231
80767	199	8/21	Clinton-----	6	10.52 Dry	34.59 38.66	43.42 48.52	11.47 12.82	3.80 4.25	.35 .39	10953 12241	----- 13151
80768	199	8/21	Clinton-----	6	11.73 Dry	35.25 39.93	43.87 49.70	9.15 10.37	3.48 3.94	.22 .25	11034 12500	----- 14201
80769	199	8/21	Clinton-----	6	11.26 Dry	34.94 39.38	42.49 47.87	11.31 12.75	3.46 3.90	.77 .87	10774 12141	----- 14207
2856	<sup>13</sup> B. M. 46	2/06	Clinton-----	6	11.64 Dry	35.41 40.07	44.29 50.13	8.66 9.80	3.41 3.86	-----	11290 12776	----- 14415
2857	<sup>13</sup> B. M. 46	2/06	Clinton-----	6	12.15 Dry	35.60 40.52	42.97 48.92	9.28 10.56	4.01 4.56	-----	-----	-----
2991	<sup>13</sup> B. M. 46	2/06	Clinton-----	6	11.35 Dry	34.62 39.05	40.63 45.83	13.40 15.12	4.76 5.37	-----	10733 12107	----- 14312
2854	<sup>13</sup> B. M. 47	2/06	Clinton-----	6	13.43 Dry	33.02 38.14	44.37 51.26	9.18 10.60	3.35 3.87	-----	10937 12634	----- 14619
2855	<sup>13</sup> B. M. 47	2/06	Clinton-----	6	12.73 Dry	33.35 38.21	44.32 50.79	9.60 11.00	3.60 4.13	-----	-----	-----
2972	<sup>13</sup> B. M. 47	2/06	Clinton-----	6	11.44 Dry	33.63 38.31	43.92 49.60	10.71 13.09	4.94 5.58	-----	10958 12373	----- 14983
4384	<sup>13</sup> B. M. 48	1/07	Clinton-----	6	14.45 Dry	29.76 34.79	46.16 53.95	9.63 11.26	2.09 2.44	-----	-----	-----
4385	<sup>13</sup> B. M. 48	1/07	Clinton-----	6	15.06 Dry	29.48 34.71	45.81 53.93	9.65 11.36	1.05 1.24	-----	10726 12629	----- 14447
4785	53	4/12	Franklin-----	6	10.57 Dry	33.37 37.30	43.09 48.19	12.97 14.51	.83 .93	4.38 4.89	10714 11980	----- 14236
4786	53	4/12	Franklin-----	6	10.00 Dry	32.80 36.45	50.92 56.59	6.27 6.96	.66 .73	.33 .36	12001 13334	----- 14453
4787	53	4/12	Franklin-----	6	10.15 Dry	32.88 36.59	50.56 56.27	6.41 7.14	.59 .65	.22 .25	12000 13356	----- 14494

<sup>13</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 83, 1913.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
4789	53	4/12	Franklin-----	6	10.00 Dry	32.08 35.65	50.93 56.60	6.98 7.75	.47 .52	.17 .20	11935 13261	----- 14492
4791	58	4/12	Franklin-----	6	8.70 Dry	34.62 37.92	48.92 53.59	7.76 8.49	.62 .68	.31 .34	11945 13084	----- 14426
4793	58	4/12	Franklin-----	6	9.04 Dry	34.46 37.88	48.73 53.59	7.77 8.53	.68 .74	.23 .25	11946 13133	----- 14490
4794	58	4/12	Franklin-----	6	9.05 Dry	34.45 37.88	48.75 53.59	7.75 8.53	.91 1.00	.37 .41	11923 13108	----- 14472
4810	52	4/12	Franklin-----	6	6.96 Dry	38.42 41.29	44.16 47.47	10.46 11.24	2.98 3.21	.92 .99	11848 12733	----- 14568
4811	52	4/12	Franklin-----	6	7.34 Dry	38.11 41.13	44.23 47.73	10.32 11.14	3.26 3.51	1.41 1.53	11771 12703	----- 14561
4812	52	4/12	Franklin-----	6	6.00 Dry	38.55 41.01	45.46 48.36	9.99 10.63	3.16 3.36	1.20 1.28	11998 12776	----- 14534
5008	51	6/12	Franklin-----	6	10.63 Dry	33.23 37.18	48.79 54.59	7.35 8.23	1.40 1.19	.38 .43	11800 13207	----- 14534
5009	51	6/12	Franklin-----	6	9.83 Dry	33.91 37.62	49.14 54.48	7.12 7.90	1.13 1.25	.18 .20	11942 13245	----- 14522
5011	51	6/12	Franklin-----	6	10.39 Dry	33.13 36.97	49.23 54.93	7.25 8.10	1.37 1.53	.06 .06	11920 13303	----- 14629
5208	56	7/12	Franklin-----	6	6.43 Dry	37.62 40.20	44.77 47.85	11.18 11.95	2.64 2.82	.64 .68	11834 12646	----- 14620
5209	56	7/12	Franklin-----	6	10.15 Dry	35.55 39.56	45.82 51.01	8.48 9.43	1.41 1.57	.80 .89	11691 13011	----- 14539
5211	56	7/12	Franklin-----	6	7.71 Dry	35.75 38.74	45.38 49.17	11.16 12.09	3.50 3.79	.89 .96	11644 12616	----- 14644
5222	50	7/12	Franklin-----	6	9.66 Dry	34.55 38.24	47.85 52.97	7.95 8.79	1.04 1.15	.31 .34	11916 13190	----- 14613
5223	50	7/12	Franklin-----	6	9.00 Dry	35.10 38.58	47.35 53.03	8.55 9.39	1.08 1.19	.40 .44	11973 13159	----- 14684
5224	50	7/12	Franklin-----	6	9.36 Dry	34.86 38.46	48.90 53.96	6.88 7.58	1.01 1.12	.43 .48	12122 13373	----- 14603
5507	57	8/12	Franklin-----	6	9.83 Dry	31.82 35.28	49.78 55.22	8.57 9.50	.79 .88	.35 .39	11702 12977	----- 14490
5508	57	8/12	Franklin-----	6	9.44 Dry	32.57 35.97	50.09 55.31	7.90 8.72	.67 .74	.29 .32	11914 13156	----- 14547
5509	57	8/12	Franklin-----	6	9.75 Dry	32.33 35.83	48.77 54.03	9.15 10.14	1.39 1.54	.32 .35	11652 12911	----- 14550
12701	134	6/21	Franklin-----	6	8.88 Dry	32.17 35.31	50.84 55.80	8.11 8.89	.78 .86	.11 .12	11862 13018	----- 14428
12702	134	6/21	Franklin-----	6	7.11 Dry	34.23 36.85	48.83 52.57	9.83 10.58	1.30 1.40	.35 .37	11883 12716	----- 14483
12703	134	6/21	Franklin-----	6	8.31 Dry	34.07 37.16	49.44 53.91	8.18 8.93	1.02 1.12	.21 .23	12010 13043	----- 14534
12720	134	6/21	Franklin-----	6	9.24 Dry	32.39 35.69	49.49 54.53	8.88 9.78	1.50 1.65	.21 .23	11722 12833	----- 14496

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
12721	134	6/21	Franklin.....	6	7.61 Dry	34.77 37.63	48.96 53.00	8.66 9.37	1.70 1.85	.05 .05	12038 12937	----- 14559
12722	134	6/21	Franklin.....	6	8.56 Dry	31.76 34.73	50.52 55.26	9.16 10.01	1.29 1.41	.32 .35	11662 12683	----- 14346
12729	136	6/21	Franklin.....	6	6.72 Dry	35.94 38.53	46.32 49.65	11.02 11.82	3.11 3.33	.72 .78	11599 12268	----- 14365
12730	136	6/21	Franklin.....	6	6.95 Dry	35.53 38.18	46.19 49.65	11.33 12.17	3.42 3.68	.51 .55	11469 12444	----- 14450
12731	136	6/21	Franklin.....	6	8.36 Dry	32.98 35.99	51.49 56.19	7.17 7.82	1.28 1.40	.26 .28	12070 13100	----- 14430
12732	136	6/21	Franklin.....	6	6.23 Dry	36.30 38.88	46.99 50.32	10.08 10.80	3.63 3.89	.39 .42	11797 12440	----- 14433
12733	136	6/21	Franklin.....	6	8.46 Dry	35.77 39.08	46.51 50.80	9.26 10.12	2.40 2.73	.15 .17	11712 12607	----- 14487
12734	136	6/21	Franklin.....	6	7.52 Dry	34.46 37.26	48.88 52.86	9.14 9.88	1.20 1.30	.22 .24	11895 12797	----- 14440
30892	137	9/18	Franklin.....	6	10.04 Dry	35.48 39.44	47.29 52.57	7.19 7.99	.77 .86	-----	11945 13279	----- 14608
30893	137	9/18	Franklin.....	6	11.33 Dry	32.38 36.52	47.18 53.21	9.11 10.27	.59 .67	-----	11430 12892	----- 14521
30894	137	9/18	Franklin.....	6	9.04 Dry	36.20 39.80	47.86 52.61	6.90 7.59	1.28 1.41	-----	12164 13374	----- 14615
30895	137	9/18	Franklin.....	6	10.43 Dry	32.10 36.95	48.50 54.15	7.97 8.90	.52 .58	-----	11713 13075	----- 14482
29741	138	2/18	Franklin.....	6	9.73 Dry	34.19 37.88	48.97 54.27	7.09 7.85	1.08 1.20	-----	11997 13289	----- 14559
29742	138	2/18	Franklin.....	6	10.34 Dry	33.70 37.59	46.90 52.31	9.06 10.10	.54 .60	-----	11529 12857	----- 14451
29743	138	2/18	Franklin.....	6	9.28 Dry	34.17 37.67	48.77 53.75	7.78 8.58	.74 .82	-----	11885 13100	----- 14465
29744	138	2/18	Franklin.....	6	9.17 Dry	34.29 37.75	49.15 54.11	7.39 8.14	1.17 1.29	-----	12163 13390	----- 14723
29745	138	2/18	Franklin.....	6	10.56 Dry	34.81 38.92	44.74 50.01	9.90 11.07	.45 .50	-----	11354 12695	----- 14271
29746	138	2/18	Franklin.....	6	10.36 Dry	32.12 35.83	47.21 52.67	10.31 11.50	.56 .62	-----	11326 12634	----- 14446
29754	138	2/18	Franklin.....	6	9.50 Dry	36.82 40.69	49.82 55.04	3.86 4.27	.79 .87	-----	12515 13829	----- 13831
12682	139	6/21	Franklin.....	6	7.06 Dry	35.69 38.41	45.24 48.67	12.01 12.52	3.50 3.77	.33 .35	11487 12171	----- 14494
12683	139	6/21	Franklin.....	6	10.07 Dry	32.64 36.29	50.15 55.77	7.14 7.94	.76 .85	.22 .24	11850 13177	----- 14441
12684	139	6/21	Franklin.....	6	8.28 Dry	34.98 38.14	49.38 53.84	7.36 8.02	1.13 1.24	.25 .27	12047 13072	----- 14419
12698	139	6/21	Franklin.....	6	6.79 Dry	37.24 39.96	46.38 49.76	9.59 10.28	3.38 3.63	.31 .33	11858 12541	----- 14430



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
12699	139	6/21	Franklin-----	6	8.07 Dry	33.85 36.82	49.71 54.68	8.37 9.10	1.02 1.11	.05 .05	11908 12900	----- 14420
12700	139	6/21	Franklin-----	6	6.96 Dry	36.53 39.27	44.79 48.13	11.72 12.60	3.95 4.24	.20 .22	11590 12245	----- 14567
12738	140	6/21	Franklin-----	6	5.74 Dry	36.04 38.23	48.19 51.13	10.03 10.64	3.37 3.57	.36 .38	11960 12509	----- 14453
12739	140	6/21	Franklin-----	6	6.64 Dry	36.34 38.92	48.38 51.83	8.64 9.25	2.75 2.94	.05 .05	12043 12753	----- 14444
12740	140	6/21	Franklin-----	6	8.15 Dry	32.79 35.70	51.10 55.63	7.96 8.67	1.51 1.64	.14 .16	11890 12863	----- 14337
30882	141	10/18	Franklin-----	6	9.94 Dry	33.39 37.08	48.99 54.39	7.68 8.53	1.14 1.27	-----	11880 13192	----- 14571
30883	141	10/18	Franklin-----	6	10.04 Dry	33.08 36.77	49.42 54.94	7.46 8.29	1.24 1.38	-----	11898 13226	----- 14677
30884	141	10/18	Franklin-----	6	10.73 Dry	33.02 36.99	47.65 53.38	8.60 9.63	1.61 1.80	-----	11637 13036	----- 14609
30885	141	10/18	Franklin-----	6	10.05 Dry	33.93 37.72	48.58 54.01	7.44 8.27	1.40 1.56	-----	11884 13210	----- 14674
23442	142	12/15	Franklin-----	6	9.72 Dry	32.91 36.45	48.92 54.19	8.45 9.36	.87 .96	-----	11866 13144	----- 14653
23443	142	12/15	Franklin-----	6	10.24 Dry	32.54 36.25	49.49 55.14	7.73 8.61	.80 .89	-----	11941 13304	----- 14697
30887	143	10/18	Franklin-----	6	11.15 Dry	33.95 38.21	47.50 53.46	7.40 8.33	1.36 1.53	-----	11734 13207	----- 14681
30888	143	10/18	Franklin-----	6	9.08 Dry	34.99 38.49	48.21 53.02	7.72 8.49	1.43 1.57	-----	12019 13219	----- 14723
30889	143	10/18	Franklin-----	6	10.31 Dry	33.54 37.40	49.91 55.64	6.24 6.96	1.11 1.24	-----	12055 13441	----- 14574
30867	144	9/18	Franklin-----	6	10.74 Dry	32.20 36.07	50.91 57.04	6.15 6.89	.83 .93	-----	12001 13444	----- 14555
30868	144	9/18	Franklin-----	6	10.36 Dry	32.52 36.28	47.17 52.62	9.95 11.10	.63 .70	-----	11356 12668	----- 14416
30869	144	9/18	Franklin-----	6	9.86 Dry	32.38 35.92	49.68 55.12	8.08 8.96	.93 1.03	-----	11925 13230	----- 14682
30870	144	9/18	Franklin-----	6	10.91 Dry	32.32 36.28	50.89 57.12	5.88 6.60	.56 .63	-----	12049 13525	----- 14548
12865	145	7/21	Franklin-----	6	8.33 Dry	31.23 34.07	51.35 56.02	9.09 9.91	1.24 1.35	.25 .27	11846 12859	----- 14512
12866	145	7/21	Franklin-----	6	8.17 Dry	32.54 35.43	50.60 55.11	8.69 9.46	1.20 1.31	.15 .17	11942 12945	----- 14525
12867	145	7/21	Franklin-----	6	8.96 Dry	32.71 35.93	50.71 55.70	7.62 8.37	.67 .74	.08 .08	11964 13104	----- 14472
20080	146	11/14	Franklin-----	6	9.33 Dry	31.15 34.36	50.36 55.54	9.16 10.10	.56 .62	-----	11806 13021	----- 14636
20081	146	11/14	Franklin-----	6	10.01 Dry	29.93 33.26	50.08 55.65	9.98 11.09	.52 .58	-----	11522 12803	----- 14564



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
20082	146	11/14	Franklin.....	6	9.25 Dry	31.03 34.19	51.02 56.22	8.70 9.59	.48 .53	----- -----	11857 13064	----- 14478
20723	146	1/15	Franklin.....	6	8.21 Dry	32.46 35.36	49.00 53.39	10.33 11.25	.96 1.05	----- -----	11770 12823	----- 14525
20724	146	1/15	Franklin.....	6	9.07 Dry	32.24 35.45	48.42 53.26	10.27 11.29	1.14 1.25	----- -----	11606 12764	----- 14578
20725	146	1/15	Franklin.....	6	9.83 Dry	31.44 34.87	51.53 57.15	7.20 7.98	.50 .55	----- -----	11990 13297	----- 14568
30877	147	10/18	Franklin.....	6	8.72 Dry	34.31 37.59	46.15 50.56	10.82 11.85	3.81 4.17	----- -----	11543 12645	----- 14645
30878	147	9/18	Franklin.....	6	10.04 Dry	33.77 37.54	47.53 52.83	8.66 9.63	2.43 2.70	----- -----	11725 13034	----- 14791
30879	147	10/18	Franklin.....	6	9.67 Dry	33.32 36.89	46.67 51.66	10.34 11.45	3.07 3.40	----- -----	11547 12784	----- 14485
30880	147	10/18	Franklin.....	6	9.27 Dry	34.27 37.77	45.48 50.13	10.98 12.10	3.79 4.18	----- -----	11461 12632	----- 14677
1695	<sup>14</sup> B. M. 9	/05	Franklin.....	6	10.28 Dry	32.04 35.71	49.74 55.44	7.94 8.85	1.06 1.18	----- -----	----- -----	----- -----
1694	<sup>14</sup> B. M. 9	/05	Franklin.....	6	9.46 Dry	33.55 37.06	48.87 53.97	8.12 8.97	1.63 1.80	----- -----	11990 13243	----- 14725
1786	<sup>14</sup> B. M. 9	/05	Franklin.....	6	8.31 Dry	31.65 34.52	49.56 54.05	10.48 11.43	1.55 1.69	----- -----	11727 12789	----- 14647
477D	<sup>14</sup> B. M. 10	8/08	Franklin.....	6	9.15 Dry	34.98 38.50	47.27 52.03	8.60 9.47	.99 1.09	----- -----	----- -----	----- -----
478D	<sup>14</sup> B. M. 10	8/08	Franklin.....	6	8.59 Dry	32.15 35.17	51.03 55.83	8.23 9.00	1.29 1.41	----- -----	12114 13253	----- 14728
486D	<sup>14</sup> B. M. 10	8/08	Franklin.....	6	8.12 Dry	34.46 37.51	48.79 53.10	8.63 9.39	1.13 1.23	----- -----	12064 13131	----- 14654
495D	<sup>14</sup> B. M. 10	8/08	Franklin.....	6	8.61 Dry	33.19 36.32	46.82 51.23	11.38 12.45	.95 1.04	----- -----	11585 12676	----- 14682
1648	<sup>15</sup> B. M. 11	8/08	Franklin.....	6	9.50 Dry	31.98 35.34	47.08 52.02	11.44 12.64	1.45 1.60	----- -----	11506 12713	----- 14780
1871	<sup>15</sup> B. M. 12	7/06	Franklin.....	6	9.90 Dry	28.67 31.82	53.69 59.59	7.74 8.59	.48 .53	----- -----	12001 13320	----- 14700
1872	<sup>15</sup> B. M. 12	7/06	Franklin.....	6	10.53 Dry	29.06 32.48	53.01 59.25	7.40 8.27	.47 .53	----- -----	----- -----	----- -----
3408	<sup>15</sup> B. M. 12	7/06	Franklin.....	6	9.65 Dry	30.87 34.17	53.23 58.91	6.25 6.92	.45 .50	----- -----	----- -----	----- -----
1926	<sup>15</sup> B. M. 12	7/06	Franklin.....	6	14.91 Dry	26.66 31.33	49.50 58.18	8.93 10.49	.52 .61	----- -----	10958 12879	----- 14545
2020	<sup>15</sup> B. M. 12	7/06	Franklin.....	6	10.72 Dry	29.86 33.45	50.06 56.07	9.36 10.48	.91 1.02	----- -----	11686 13088	----- 14794
3447	<sup>15</sup> B. M. 12	7/06	Franklin.....	6	9.58 Dry	29.18 32.27	50.24 55.56	11.00 12.17	.52 .58	----- -----	11428 12632	----- 14561

<sup>14</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 83, 1913.<sup>15</sup> Ibid., p. 84.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
3448	<sup>15</sup> B. M. 12	7/06	Franklin-----	6	9.45 Dry	29.49 32.57	51.99 57.41	9.07 10.02	.60 .66	-----	11695 12915	----- 14503
3451	<sup>15</sup> B. M. 12	7/06	Franklin-----	6	8.30 Dry	30.23 32.97	50.90 55.50	10.57 11.53	.52 .57	-----	11543 12587	----- 14394
5214	<sup>15</sup> B. M. 12	7/06	Franklin-----	6	11.82 Dry	27.66 31.37	55.10 62.47	5.42 6.16	.46 .52	-----	11961 13565	----- 14547
5237	<sup>15</sup> B. M. 12	7/06	Franklin-----	6	11.50 Dry	26.70 30.17	52.67 59.51	9.13 10.32	.60 .68	-----	11410 12893	----- 14531
23473	<sup>16</sup> B. M. 13	11/15	Franklin-----	6	9.28 Dry	34.21 37.71	47.76 52.64	8.75 9.65	1.10 1.21	-----	11950 13172	----- 14745
23474	<sup>16</sup> B. M. 13	11/15	Franklin-----	6	8.91 Dry	35.51 38.98	47.46 52.11	8.12 8.91	.80 .88	-----	12083 13266	----- 14707
23475	<sup>16</sup> B. M. 13	11/15	Franklin-----	6	8.82 Dry	33.91 37.19	48.87 53.60	8.40 9.21	.81 .89	-----	12038 13203	----- 14691
23476	<sup>16</sup> B. M. 13	11/15	Franklin-----	6	9.25 Dry	33.76 37.20	48.08 52.98	8.91 9.82	1.07 1.18	-----	11898 13111	----- 14706
23477	<sup>16</sup> B. M. 13	11/15	Franklin-----	6	8.75 Dry	33.71 36.94	48.44 53.09	9.10 9.97	1.55 1.70	-----	11943 13088	----- 14725
23478	<sup>16</sup> B. M. 13	11/15	Franklin-----	6	9.01 Dry	34.52 37.94	47.87 52.61	8.60 9.45	1.08 1.19	-----	11970 13154	----- 14675
22686	<sup>16</sup> B. M. 14	7/15	Franklin-----	6	9.33 Dry	33.60 37.06	48.48 53.47	8.59 9.47	.82 .90	-----	11824 13041	----- 14556
22687	<sup>16</sup> B. M. 14	7/15	Franklin-----	6	9.05 Dry	33.74 37.10	48.65 53.49	8.56 9.41	.96 1.06	-----	11858 13039	----- 14548
22688	<sup>16</sup> B. M. 14	7/15	Franklin-----	6	8.59 Dry	34.66 37.92	48.89 53.48	7.86 8.60	.92 1.01	-----	12089 13225	----- 14612
22689	<sup>16</sup> B. M. 14	7/15	Franklin-----	6	8.91 Dry	33.87 37.18	49.21 54.03	8.01 8.79	.99 7.09	-----	12017 13192	----- 14610
22690	<sup>16</sup> B. M. 14	7/15	Franklin-----	6	10.06 Dry	33.92 37.72	47.26 52.54	8.76 9.74	.92 1.02	-----	11756 13072	----- 14775
22691	<sup>16</sup> B. M. 14	7/15	Franklin-----	6	9.19 Dry	33.80 37.22	48.61 53.53	8.40 9.25	.92 1.01	-----	11925 13131	----- 14622
23442	<sup>16</sup> B. M. 15	11/15	Franklin-----	6	9.72 Dry	32.91 36.45	48.92 54.19	8.45 9.36	.87 .96	-----	11866 13144	----- 14653
23443	<sup>16</sup> B. M. 15	11/15	Franklin-----	6	10.24 Dry	32.54 36.25	49.49 55.14	7.73 8.61	.80 .89	-----	11941 13304	----- 14697
23444	<sup>16</sup> B. M. 15	11/15	Franklin-----	6	9.93 Dry	33.13 36.78	48.77 54.15	8.17 9.07	.75 .83	-----	11896 13207	----- 14668
20080	<sup>16</sup> B. M. 16	11/14	Franklin-----	6	9.33 Dry	31.15 34.36	50.36 55.54	9.16 10.10	.56 .62	-----	11806 13021	----- 14636
20081	<sup>16</sup> B. M. 16	11/14	Franklin-----	6	10.01 Dry	29.93 33.26	50.08 55.65	9.98 11.09	.52 .58	-----	11522 12803	----- 14564
20082	<sup>16</sup> B. M. 16	11/14	Franklin-----	6	9.25 Dry	31.03 34.19	51.02 56.22	8.70 9.59	.48 .53	-----	11857 13064	----- 14606

<sup>16</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 123, p. 33, 1918.

TABLE 2.—*Analyses of mine samples (not exactly indicative of commercial output)*—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
20083	16B. M. 16	11/14	Franklin	6	9.61 Dry	30.68 33.94	50.44 55.80	9.27 10.26	.50 .55	-----	11725 12971	----- 14604
20723	16B. M. 17	11/14	Franklin	6	8.21 Dry	32.46 35.36	49.00 53.39	10.33 11.25	.96 1.05	-----	11770 12823	----- 14632
20724	16B. M. 17	11/14	Franklin	6	9.07 Dry	32.24 35.45	48.42 53.26	10.27 11.29	1.14 1.25	-----	11606 12764	----- 14578
20725	16B. M. 17	11/14	Franklin	6	9.83 Dry	31.44 34.87	51.53 57.15	7.20 7.98	.50 .55	-----	11990 13297	----- 14568
20726	16B. M. 17	11/14	Franklin	6	8.87 Dry	32.72 35.90	49.05 53.83	9.36 10.27	.94 1.03	-----	11785 12931	----- 14915
22915	16B. M. 18	8/15	Franklin	6	9.78 Dry	32.29 35.79	46.73 55.12	8.20 9.09	1.02 1.13	-----	11860 13145	----- 14613
22916	16B. M. 18	8/15	Franklin	6	10.23 Dry	31.97 35.61	49.87 55.56	7.93 8.83	.91 1.01	-----	11839 13189	----- 14613
22917	16B. M. 18	8/15	Franklin	6	10.48 Dry	33.53 37.46	43.02 54.75	6.67 7.79	1.22 1.36	-----	11932 13329	----- 14598
22918	16B. M. 18	8/15	Franklin	6	8.86 Dry	33.27 36.50	49.48 54.29	8.39 9.21	.86 .94	-----	11970 13133	----- 14614
22919	17B. M. 19	8/15	Franklin	6	10.48 Dry	31.87 35.60	49.10 54.85	8.55 9.55	1.16 1.30	-----	11678 13046	----- 14590
22920	17B. M. 19	8/15	Franklin	6	10.16 Dry	32.66 36.35	49.63 55.23	7.56 8.42	.99 1.10	-----	11921 13270	----- 14634
22921	17B. M. 19	8/15	Franklin	6	9.99 Dry	32.82 36.46	49.27 54.74	7.92 8.80	1.03 1.14	-----	11857 13172	----- 14593
26129	18B. M. 58	10/16	Franklin	6	10.61 Dry	33.39 37.35	48.37 54.11	7.63 8.54	1.02 1.14	-----	11855 13262	----- 14646
30266	18B. M. 58	5/18	Franklin	6	7.86 Dry	34.10 37.01	49.62 53.85	8.42 9.14	1.18 1.28	-----	12141 13176	----- 14709
30267	19B. M. 58	4/18	Franklin	6	7.83 Dry	34.70 37.65	47.96 52.03	9.51 10.32	1.20 1.30	-----	11963 12980	----- 14651
30844	19B. M. 58	8/18	Franklin	6	8.02 Dry	35.66 38.77	48.46 52.68	7.86 8.55	1.07 1.16	-----	12128 13187	----- 14566
31050	19B. M. 58	10/18	Franklin	6	7.35 Dry	36.70 39.61	47.88 51.68	8.07 8.71	1.02 1.10	-----	12164 13129	----- 14526
29741	19B. M. 21	3/18	Franklin	6	9.73 Dry	34.19 37.88	48.99 54.27	7.09 7.85	1.08 1.20	-----	11997 13289	----- 14562
29742	19B. M. 21	3/18	Franklin	6	10.34 Dry	33.70 37.59	46.90 52.31	9.06 10.10	.54 .60	-----	11529 12857	----- 14449
29743	19B. M. 21	3/18	Franklin	6	9.28 Dry	34.17 37.67	48.77 53.75	7.78 8.58	.74 .82	-----	11885 13100	----- 14465
23744	19B. M. 21	3/18	Franklin	6	9.17 Dry	34.29 37.75	49.15 54.11	7.39 8.14	1.17 1.29	-----	12163 13390	----- 14723

<sup>17</sup> Fieldner, A. C., and others, Analyses of coal:

U. S. Bureau of Mines Bull. 123, p. 34, 1918.

<sup>18</sup> Fieldner, A. C., and others, Analyses of coal:

U. S. Bureau of Mines Bull. 193, p. 30, 1922.

<sup>19</sup> Ibid., p. 31.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
29745	<sup>19</sup> B. M. 21	3/18	Franklin-----	6	10.56 Dry	34.81 38.92	44.73 50.01	9.90 11.07	.45 .50	-----	11354 12695	----- 14433
29746	<sup>19</sup> B. M. 21	3/18	Franklin-----	6	10.36 Dry	32.12 35.83	47.21 52.67	10.31 11.50	.56 .62	-----	11326 12634	----- 14446
23754	<sup>19</sup> B. M. 21	3/18	Franklin-----	6	9.50 Dry	36.82 40.69	49.82 55.04	3.86 4.27	.79 .87	-----	12515 13829	----- 14524
30205	<sup>20</sup> B. M. 20	5/18	Franklin-----	6	7.64 Dry	31.37 33.96	50.63 54.17	10.96 11.87	1.06 1.15	-----	11687 12654	----- 14554
30207	<sup>20</sup> B. M. 20	4/18	Franklin-----	6	8.86 Dry	31.23 34.27	49.28 54.07	10.63 11.66	1.10 1.21	-----	11603 12731	----- 14606
26492	<sup>20</sup> B. M. 22	12/16	Franklin-----	6	9.54 Dry	32.91 36.38	48.41 53.52	9.14 10.10	.98 1.08	-----	11772 13014	----- 14644
26493	<sup>20</sup> B. M. 22	12/16	Franklin-----	6	9.58 Dry	33.25 36.77	50.16 55.48	7.01 7.75	1.08 1.19	-----	12051 13259	----- 14585
26494	<sup>20</sup> B. M. 22	12/16	Franklin-----	6	10.97 Dry	33.70 37.85	46.86 52.64	8.47 9.51	.99 1.11	-----	11671 13109	----- 14812
26495	<sup>20</sup> B. M. 22	12/16	Franklin-----	6	10.26 Dry	33.17 36.96	48.39 53.93	8.18 9.11	1.31 1.46	-----	11858 13214	----- 14705
26496	<sup>20</sup> B. M. 22	12/16	Franklin-----	6	9.68 Dry	32.90 36.43	48.35 53.53	9.07 10.04	1.09 1.21	-----	11693 12946	----- 14260
30206	<sup>20</sup> B. M. 22	4/18	Franklin-----	6	8.49 Dry	34.11 37.28	48.71 53.22	8.69 9.50	1.11 1.21	-----	12964 13183	----- 14731
30208	<sup>20</sup> B. M. 22	11/16	Franklin-----	6	8.05 Dry	34.51 37.53	47.67 51.85	9.77 10.62	1.06 1.15	-----	11927 12971	----- 14635
30485	<sup>20</sup> B. M. 22	11/16	Franklin-----	6	9.66 Dry	34.06 37.70	47.27 52.33	9.01 9.97	1.17 1.30	-----	11866 13135	----- 14650
30486	<sup>20</sup> B. M. 22	11/16	Franklin-----	6	10.04 Dry	33.61 37.36	48.01 53.37	8.34 9.27	1.10 1.22	-----	11898 13226	----- 14739
5528	-----	8/12	Gallatin-----	6	10.82 Dry	33.83 37.94	42.43 47.57	12.92 14.49	4.93 5.53	.42 .47	11263 11609	----- 15193
5510	223	8/12	Gallatin-----	6	4.47 Dry	33.33 36.98	47.73 49.96	11.46 13.06	3.59 3.76	.05 .05	12320 12895	----- 15157
5511	223	8/12	Gallatin-----	6	4.10 Dry	36.79 38.36	50.38 52.54	8.73 9.10	3.83 3.99	.04 .04	12849 13397	----- 15001
5513	223	8/12	Gallatin-----	6	12.55 Dry	34.81 39.81	46.34 52.98	6.30 7.21	5.61 6.41	.01 .01	12015 13739	----- 15129
23426	<sup>21</sup> B. M. 57	11/15	Gallatin-----	6	3.70 Dry	37.72 39.17	49.17 51.06	9.41 9.77	3.03 3.15	-----	12987 13487	----- 15375
4773	55	4/12	Jackson-----	6	10.88 Dry	31.71 35.57	48.90 54.88	8.51 9.55	.65 .73	.30 .34	11594 13009	----- 14531
4780	55	4/12	Jackson-----	6	7.17 Dry	36.36 39.18	45.25 48.74	11.22 12.08	3.92 4.22	.43 .47	11678 12581	----- 14617

<sup>20</sup> Ibid., p. 32.<sup>21</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 123, p. 34, 1918.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
4784	55	4/12	Jackson-----	6	8.82 Dry	35.30 38.72	44.96 49.30	10.92 11.98	3.46 3.79	.50 .54	11547 12663	14676
12647	183	6/21	Jackson-----	6	10.34 Dry	35.71 39.82	45.74 51.02	8.21 9.16	1.03 1.15	.03 .03	11585 12920	14376
12648	183	6/21	Jackson-----	6	10.00 Dry	32.81 36.46	47.33 52.58	9.86 10.96	1.27 1.41	.07 .08	11356 12618	14357
12649	183	6/21	Jackson-----	6	9.16 Dry	34.31 37.77	46.76 53.00	9.77 10.33	1.24 1.36	.20 .22	11523 12684	14317
12650	183	6/21	Jackson-----	6	9.86 Dry	33.70 37.38	45.30 50.26	11.14 12.36	2.04 2.26	.27 .30	11169 12391	14377
12651	183	6/21	Jackson-----	6	9.46 Dry	35.05 38.71	46.85 51.75	8.64 9.54	1.75 1.93	.07 .07	11586 12796	14326
12652	183	6/21	Jackson-----	6	9.66 Dry	35.94 39.78	45.96 50.87	8.44 9.35	1.28 1.42	.22 .24	11583 12751	14307
2611	224	1/10	Livingston-----	6	16.50 Dry	32.63 39.07	45.50 54.49	5.37 6.44	1.60 1.92	-----	11297 13529	14600
5086	66	7/12	Macoupin-----	6	4.29 Dry	39.09 45.60	37.21 43.42	9.41 10.98	4.13 4.82	.32 .37	10635 12408	14234
5087	66	7/12	Macoupin-----	6	13.77 Dry	38.69 44.86	36.74 42.62	10.80 12.52	4.37 5.07	.62 .71	10493 12169	14236
5088	66	7/12	Macoupin-----	6	14.73 Dry	38.33 44.95	37.24 43.69	9.70 11.36	4.50 5.28	.30 .35	10522 12339	14237
5097	69	7/12	Macoupin-----	6	14.73 Dry	36.26 42.53	36.11 42.34	12.90 15.13	4.62 5.42	.28 .33	10099 11843	14342
5098	69	7/12	Macoupin-----	6	13.68 Dry	38.02 44.05	37.72 43.70	10.58 12.25	4.43 5.12	.21 .25	10618 12300	14346
5099	69	7/12	Macoupin-----	6	14.19 Dry	37.92 44.19	37.03 43.15	10.86 12.66	4.21 4.91	.39 .45	10599 12351	14476
5100	67	7/12	Macoupin-----	6	15.12 Dry	38.28 45.09	36.55 43.06	10.05 11.85	3.85 4.54	.31 .37	10610 12501	14488
5101	67	7/12	Macoupin-----	6	14.90 Dry	37.75 44.35	38.43 45.16	8.92 10.49	3.67 4.31	.45 .53	10735 12614	14367
5102	67	7/12	Macoupin-----	6	14.67 Dry	35.49 41.59	38.83 45.50	11.01 12.91	4.15 4.86	.22 .26	10433 12227	14370
5112	68	7/12	Macoupin-----	6	12.11 Dry	40.32 45.88	39.14 44.52	8.43 9.60	4.39 5.00	.38 .43	11170 12705	14335
5113	68	7/12	Macoupin-----	6	13.27 Dry	38.58 44.48	38.15 43.99	10.00 11.53	4.89 5.64	.27 .31	10730 12442	14400
5114	68	7/12	Macoupin-----	6	13.23 Dry	38.85 44.77	38.91 44.84	9.01 10.39	4.39 5.06	.28 .32	10935 12601	14359
81323	185	9/21	Macoupin-----	6	13.32 Dry	37.97 43.80	39.84 45.97	8.87 10.23	3.40 3.92	.31 .36	10893 12567	14252
81324	185	9/21	Macoupin-----	6	12.41 Dry	37.96 43.34	39.98 45.64	9.65 11.02	3.57 4.08	.29 .33	10889 12432	14241
81325	185	9/21	Macoupin-----	6	9.84 Dry	42.13 46.73	39.51 43.82	8.52 9.45	3.51 3.89	.24 .27	11426 12673	14237



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
81327	186	9/21	Macoupin.....	6	11.18 Dry	37.54 42.27	40.19 45.24	11.09 12.49	3.65 4.11	1.00 1.13	10841 12206	----- 14243
81328	186	9/21	Macoupin.....	6	9.01 Dry	38.20 43.08	41.42 45.52	10.37 11.40	4.32 4.75	.58 .64	11193 12301	----- 14177
81329	186	9/21	Macoupin.....	6	13.17 Dry	36.72 42.29	40.09 46.17	10.02 11.51	4.04 4.65	.40 .46	10685 12306	----- 14206
81331	228	9/21	Macoupin.....	6	14.03 Dry	37.17 43.24	39.60 46.06	9.20 10.70	3.49 4.06	-----	10753 12508	----- 14273
81332	187	9/21	Macoupin.....	6	13.30 Dry	37.46 43.21	38.68 44.61	10.56 12.18	4.23 4.88	.36 .42	10621 12250	----- 14264
81333	187	9/21	Macoupin.....	6	13.52 Dry	36.25 41.92	38.70 44.75	11.53 13.33	4.38 5.06	.63 .73	10471 12108	----- 14314
81334	187	9/21	Macoupin.....	6	13.86 Dry	36.52 42.40	39.11 45.40	10.51 12.20	3.97 4.61	.22 .26	10554 12252	----- 14261
81085	188	8/21	Macoupin.....	6	12.30 Dry	38.69 44.12	41.07 46.83	7.94 9.05	3.62 4.13	.15 .17	11080 12634	----- 14127
81086	188	8/21	Macoupin.....	6	11.39 Dry	39.03 44.05	40.49 45.69	9.09 10.26	4.57 5.16	.17 .19	11037 12456	----- 14170
81087	188	8/21	Macoupin.....	6	12.24 Dry	38.25 43.58	41.24 47.00	8.27 9.42	3.61 4.11	.11 .13	11066 12609	----- 14163
81016	189	8/21	Macoupin.....	6	12.74 Dry	36.09 41.36	42.77 49.01	8.40 9.63	3.73 4.27	.15 .17	10948 12546	----- 14134
81017	189	8/21	Macoupin.....	6	15.67 Dry	33.57 38.81	41.53 49.24	9.23 10.95	3.56 4.22	.10 .12	10379 12308	----- 14090
81018	189	8/21	Macoupin.....	6	13.40 Dry	35.71 41.24	41.83 48.30	9.06 10.46	4.06 4.69	.10 .12	10711 12368	----- 14087
81020	190	8/21	Macoupin.....	6	13.92 Dry	34.44 40.01	43.00 49.95	8.64 10.04	3.79 4.40	.17 .20	10814 12563	----- 14229
81021	190	8/21	Macoupin.....	6	13.26 Dry	34.81 40.13	42.29 48.76	9.64 11.11	3.90 4.50	.07 .08	10773 12420	----- 14257
81022	190	8/21	Macoupin.....	6	15.16 Dry	33.46 39.44	41.97 49.47	9.41 11.09	3.21 3.78	.22 .26	10540 12423	----- 14235
1625	22B. M. 30	5/05	Macoupin.....	6	13.26 Dry	37.07 42.75	40.74 46.99	8.90 10.26	4.12 4.75	-----	11162 12872	----- 14637
1626	22B. M. 30	5/05	Macoupin.....	6	15.27 Dry	36.19 42.71	39.34 46.43	9.20 10.86	3.70 4.37	-----	-----	-----
1635	23B. M. 30	5/05	Macoupin.....	6	13.54 Dry	35.69 41.28	40.03 46.30	10.74 12.42	4.03 4.66	-----	10807 12499	----- 14596
1639	23B. M. 30	5/05	Macoupin.....	6	13.72 Dry	36.24 42.00	39.72 46.04	10.32 11.96	3.96 4.59	-----	10870 12598	----- 14625
4247	23B. M. 30	5/05	Macoupin.....	6	15.25 Dry	28.57 33.71	40.83 48.18	15.35 18.11	3.81 4.50	-----	9790 11551	----- 14526
2731	23B. M. 30	5/05	Macoupin.....	6	14.68 Dry	31.32 36.71	40.32 47.26	13.68 16.03	3.88 4.55	-----	10053 11782	----- 14407

<sup>22</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 85, 1913.<sup>23</sup> Ibid., p. 86.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
18545	24B. M. 31	1/14	Macoupin.....	6	12.90 Dry 43.40	37.80 45.66	38.77 45.66	9.53 10.94	4.23 4.86	----- -----	10852 12460	----- 14285
18546	24B. M. 31	1/14	Macoupin.....	6	14.16 Dry 41.39	35.53 46.84	40.21 46.84	10.10 11.77	3.70 4.31	----- -----	10615 12366	----- 14306
18553	24B. M. 31	1/14	Macoupin.....	6	13.59 Dry 43.05	37.20 45.52	39.33 45.52	9.88 11.43	3.86 4.47	----- -----	10701 12384	----- 14272
18910	24B. M. 31	1/14	Macoupin.....	6	13.38 Dry 42.09	36.88 42.00	37.50 42.00	13.24 15.11	5.05 5.76	----- -----	10361 11825	----- 14329
5067	72	7/12	Madison.....	6	13.08 Dry 43.75	38.03 42.65	37.07 42.65	11.82 13.60	5.22 6.01	.25 .28	10543 12129	----- 14423
5068	72	7/12	Madison.....	6	13.53 Dry 43.84	37.26 45.53	40.98 45.53	8.23 10.63	3.81 4.37	.30 .23	10903 12587	----- 14363
5069	72	7/12	Madison.....	6	14.86 Dry 43.84	37.32 45.53	38.76 45.53	9.06 10.63	3.73 4.37	.20 .23	10717 12587	----- 14363
5070	71	7/12	Madison.....	6	12.99 Dry 43.36	37.73 43.36	36.89 43.36	12.39 14.24	4.43 5.09	.72 .80	10499 12066	----- 14440
5071	71	7/12	Madison.....	6	12.14 Dry 46.82	41.13 43.24	38.00 43.24	8.73 9.94	3.52 4.00	.41 .47	11206 12759	----- 14426
5072	71	7/12	Madison.....	6	12.42 Dry 45.46	39.82 45.46	37.65 43.00	10.11 11.54	4.35 4.96	.72 .80	10909 12456	----- 14398
5075	73	7/12	Madison.....	6	14.65 Dry 45.80	39.08 44.55	38.03 44.55	8.24 9.65	3.59 4.20	.29 .34	10865 12730	----- 14347
5076	73	7/12	Madison.....	6	14.31 Dry 44.75	38.35 44.75	38.32 44.72	9.02 10.53	3.77 4.40	.31 .37	10739 12532	----- 14283
5078	73	7/12	Madison.....	6	15.18 Dry 45.27	38.40 45.16	38.30 45.16	8.12 9.57	3.94 4.64	.23 .27	10751 12673	----- 14284
5515	70	8/12	Madison.....	6	13.88 Dry 43.65	37.60 43.82	37.74 43.82	10.78 12.53	4.21 4.89	.53 .61	10551 12250	----- 14330
5517	70	8/12	Madison.....	6	12.44 Dry 44.65	39.10 44.65	38.20 43.64	10.26 11.71	5.23 6.03	.64 .73	10818 12354	----- 14343
5518	70	8/12	Madison.....	6	12.11 Dry 44.74	39.32 41.26	36.27 41.26	12.30 14.00	4.92 5.60	.47 .53	10615 12076	----- 14421
80642	191	8/21	Madison.....	6	13.76 Dry 43.18	37.50 43.34	37.63 43.34	11.71 13.48	4.52 5.20	.45 .52	10556 12156	----- 14405
80943	191	8/21	Madison.....	6	13.76 Dry 45.34	39.10 45.34	37.39 43.35	9.75 11.31	2.89 3.35	.75 .87	10805 12529	----- 14382
80944	191	8/21	Madison.....	6	12.01 Dry 43.65	38.41 43.71	38.46 43.71	11.12 12.64	3.68 4.18	.33 .38	10763 12232	----- 14300
80862	192	8/21	Madison.....	6	11.71 Dry 42.41	37.44 45.95	40.57 45.95	10.28 11.64	4.32 4.89	.38 .43	10736 12386	----- 14327
80863	192	8/21	Madison.....	6	11.19 Dry 42.79	38.00 45.58	40.84 45.58	9.97 11.23	4.12 4.64	.47 .53	11066 12460	----- 14603
80864	192	8/21	Madison.....	6	12.02 Dry 40.49	35.62 47.50	41.79 47.50	10.57 12.01	3.69 4.19	.48 .55	10888 12376	----- 14604

<sup>24</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 123, p. 34, 1918.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
1556	<sup>25</sup> B. M. 32	4/05	Madison-----	6	17.02 Dry	30.60 36.88	35.59 42.89	16.79 20.23	3.29 3.96	-----	9319 11230	----- 14900
1608A	<sup>25</sup> B. M. 32	4/05	Madison-----	6	12.27 Dry	37.22 42.43	39.16 44.63	11.35 12.94	4.66 5.31	-----	-----	-----
1609	<sup>25</sup> B. M. 32	4/05	Madison-----	6	11.87 Dry	36.57 41.50	39.98 45.36	11.58 13.14	4.75 5.39	-----	10768 12218	----- 14422
1611	<sup>25</sup> B. M. 32	4/05	Madison-----	6	11.46 Dry	34.98 39.51	36.25 40.94	17.31 19.55	4.40 4.97	-----	10026 11324	----- 14541
1780	<sup>25</sup> B. M. 32	4/05	Madison-----	6	10.83 Dry	36.24 40.64	39.75 44.58	13.18 14.78	4.53 5.08	-----	10816 12130	----- 14616
1722	<sup>26</sup> B. M. 33	4/05	Madison-----	6	10.69 Dry	33.08 37.04	36.14 40.47	20.09 22.49	4.06 4.55	-----	9713 10876	----- 14560
2774	<sup>26</sup> B. M. 34	1/06	Madison-----	6	13.07 Dry	34.85 40.09	42.02 48.34	10.06 11.57	3.59 4.13	-----	10949 12596	----- 14533
2775	<sup>26</sup> B. M. 34	1/06	Madison-----	6	12.79 Dry	35.67 40.90	40.25 46.15	11.29 12.95	3.94 4.52	-----	-----	-----
2819	<sup>26</sup> B. M. 34	1/06	Madison-----	6	13.47 Dry	34.35 39.70	40.65 46.98	11.53 13.32	4.41 5.10	-----	10510 12126	----- 14331
2803	<sup>26</sup> B. M. 34	1/06	Madison-----	6	15.68 Dry	31.28 37.10	37.45 44.41	15.59 18.49	3.98 4.72	-----	9655 11450	----- 14480
3911	<sup>26</sup> B. M. 35	10/06	Madison-----	6	14.25 Dry	35.52 41.42	40.79 47.57	9.44 11.01	3.72 4.34	-----	10892 12703	----- 14564
3913	<sup>26</sup> B. M. 35	10/06	Madison-----	6	12.69 Dry	37.40 42.89	41.15 47.13	8.76 10.03	3.62 4.15	-----	11236 12868	----- 14569
3963	<sup>26</sup> B. M. 35	10/06	Madison-----	6	13.10 Dry	30.78 35.42	40.12 46.17	16.00 18.41	4.17 4.80	-----	9983 11488	----- 14517
3958	<sup>26</sup> B. M. 35	10/06	Madison-----	6	12.47 Dry	33.12 37.84	41.85 47.81	12.56 14.35	4.37 4.99	-----	10667 12186	----- 14598
3980	<sup>26</sup> B. M. 35	10/06	Madison-----	6	12.25 Dry	33.76 38.47	41.66 47.48	12.33 14.05	4.42 5.04	-----	10719 12215	----- 14578
2772	<sup>26</sup> B. M. 36	1/06	Madison-----	6	13.51 Dry	34.64 40.05	41.70 48.21	10.15 11.74	4.01 4.64	-----	10881 12580	----- 14566
2773	<sup>26</sup> B. M. 36	1/06	Madison-----	6	13.83 Dry	34.16 39.64	42.24 49.02	9.77 11.34	4.10 4.76	-----	-----	-----
2905	<sup>26</sup> B. M. 36	1/06	Madison-----	6	11.91 Dry	35.65 40.47	39.43 44.76	13.01 14.77	5.34 6.06	-----	10615 12049	----- 14551
2896	<sup>26</sup> B. M. 36	1/06	Madison-----	6	13.03 Dry	32.65 37.54	39.79 45.75	14.53 16.71	4.35 5.01	-----	10192 11718	----- 14479
1341	<sup>26</sup> B. M. 38	9/04	Madison-----	6	15.09 Dry	31.00 36.51	46.49 54.75	7.42 8.74	.83 .98	-----	11151 13133	----- 14533
1342	<sup>27</sup> B. M. 39	9/04	Madison-----	6	14.42 Dry	32.18 37.60	44.59 52.11	8.81 10.29	1.52 1.78	-----	-----	-----
1417	<sup>27</sup> B. M. 39	9/04	Madison-----	6	12.91 Dry	31.90 36.63	43.55 50.00	11.64 13.37	1.32 1.52	-----	10804 12406	----- 14554

<sup>25</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 86, 1918.<sup>26</sup> Ibid., p. 87.<sup>27</sup> Ibid., p. 88.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
2270	<sup>28</sup> B. M. 39	9/04	Madison.....	6	15.23 Dry	31.42 37.06	44.32 52.29	9.03 10.65	1.59 1.88	-----	10901 12859	----- 14593
2271	<sup>28</sup> B. M. 39	9/04	Madison.....	6	17.79 Dry	28.78 35.01	42.34 51.50	11.09 13.49	1.40 1.70	-----	-----	-----
2852	<sup>28</sup> B. M. 39	9/04	Madison.....	6	15.54 Dry	31.26 37.01	42.27 50.05	10.93 12.94	1.38 1.63	-----	10507 12438	----- 14432
2920	<sup>28</sup> B. M. 39	9/04	Madison.....	6	15.30 Dry	30.59 36.12	43.40 51.24	10.71 12.64	1.43 1.69	-----	-----	-----
10956	<sup>29</sup> B. M. 40	9/10	Madison.....	6	12.94 Dry	35.76 41.07	41.92 48.16	9.38 10.77	3.65 4.19	-----	10973 12604	----- 14399
10957	<sup>29</sup> B. M. 40	9/10	Madison.....	6	12.31 Dry	37.57 42.84	41.09 46.86	9.03 10.30	3.58 4.08	-----	11115 12676	----- 14395
10958	<sup>29</sup> B. M. 40	9/10	Madison.....	6	12.81 Dry	36.31 41.64	41.35 47.43	9.53 10.93	3.28 3.76	-----	11023 12641	----- 14676
10959	<sup>29</sup> B. M. 40	9/10	Madison.....	6	12.70 Dry	36.36 41.65	41.47 47.50	9.47 10.85	3.67 4.20	-----	10989 12587	----- 14396
5039	87	6/12	Marion.....	6	10.06 Dry	37.96 42.21	41.09 45.69	10.89 12.10	3.62 4.35	.59 .66	11289 12555	----- 14589
5041	87	6/12	Marion.....	6	10.35 Dry	36.04 40.20	42.81 47.75	10.80 12.05	4.10 4.57	.25 .28	11227 12522	----- 14551
5044	87	6/12	Marion.....	6	10.96 Dry	36.54 41.04	40.68 45.69	11.82 13.27	4.00 4.52	.43 .48	11002 12364	----- 14583
80737	206	8/21	Marion.....	6	9.11 Dry	36.82 40.51	41.83 46.02	12.24 13.47	4.53 4.88	.32 .35	11119 12233	----- 14487
80738	206	8/21	Marion.....	6	9.05 Dry	37.00 40.68	41.78 45.94	12.17 13.38	4.63 5.42	.15 .16	11143 12252	----- 14838
80739	206	8/21	Marion.....	6	9.19 Dry	36.99 40.73	41.94 46.19	11.88 13.08	3.39 3.73	.74 .81	11243 12381	----- 14621
80740	206	8/21	Marion.....	6	11.32 Dry	35.62 40.17	42.16 47.54	10.90 12.29	3.68 4.49	.10 .11	11056 12467	----- 14528
80741	206	8/21	Marion.....	6	11.36 Dry	35.35 39.88	42.99 48.50	10.30 11.62	4.03 4.55	.15 .17	11137 12564	----- 14521
80742	206	8/21	Marion.....	6	9.59 Dry	36.93 40.85	42.67 47.19	10.81 11.96	3.51 3.88	.44 .49	11311 12511	----- 14499
80695	207	8/21	Marion.....	6	9.87 Dry	35.92 39.85	44.41 49.28	9.80 10.87	3.65 4.05	.16 .18	11494 12753	----- 14587
80696	207	8/21	Marion.....	6	10.63 Dry	37.26 41.63	42.04 47.04	10.07 11.27	2.87 3.21	.39 .44	11259 12598	----- 14451
80697	207	8/21	Marion.....	6	10.74 Dry	36.97 41.42	40.48 45.35	11.81 13.23	3.31 3.71	.76 .85	11048 12377	----- 14571
1725	<sup>30</sup> B. M. 52	6/05	Marion.....	6	10.25 Dry	37.43 41.70	39.79 44.34	12.53 13.96	3.70 4.12	-----	11077 12343	----- 14680

<sup>28</sup> Ibid.<sup>29</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 85, p. 36, 1914.<sup>30</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 88, 1913.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
1726	<sup>30</sup> B. M. 52	6/05	Marion-----	6	11.88 Dry	35.84 40.67	43.45 49.31	8.83 10.02	3.25 3.69	----- -----	----- -----	----- -----
1761	<sup>30</sup> B. M. 52	6/05	Marion-----	6	9.95 Dry	34.76 38.60	42.06 46.71	13.23 14.69	3.87 4.30	----- -----	10960 12172	----- 14620
5105	76	7/12	Montgomery---	6	14.15 Dry	36.96 43.05	38.19 44.48	10.70 12.47	3.43 4.00	.91 1.06	10547 12285	----- 14329
5106	76	7/12	Montgomery---	6	13.83 Dry	36.95 42.88	39.22 45.51	10.00 11.61	3.72 4.32	.91 1.05	10728 12455	----- 14382
5107	76	7/12	Montgomery---	6	13.70 Dry	37.25 43.17	37.93 43.94	11.12 12.89	4.39 5.08	1.04 1.20	10444 12102	----- 14225
5516	77	8/12	Montgomery---	6	14.00 Dry	36.88 42.88	40.02 46.54	9.10 10.58	3.84 4.47	.48 .57	10761 12511	----- 14268
81101	194	8/21	Montgomery---	6	12.84 Dry	37.08 42.54	40.56 46.54	9.52 10.92	3.58 4.11	.71 .81	10894 12499	----- 14302
81102	194	8/21	Montgomery---	6	13.28 Dry	36.02 41.54	40.55 46.76	10.15 11.70	4.15 4.79	.64 .74	10671 12305	----- 14239
81103	194	8/21	Montgomery---	6	13.46 Dry	35.80 41.37	41.36 47.79	9.38 10.84	4.48 5.18	.13 .16	10774 12450	----- 14269
81093	195	8/21	Montgomery---	6	12.65 Dry	36.14 41.37	41.55 47.57	9.66 11.06	3.87 4.43	.50 .57	10793 12356	----- 14171
81094	195	8/21	Montgomery---	6	11.66 Dry	37.25 42.17	41.31 46.76	9.78 11.07	3.69 4.18	.69 .78	11053 12512	----- 14345
81095	195	8/21	Montgomery---	6	14.32 Dry	34.82 40.64	41.97 48.98	8.89 10.38	3.94 4.60	.16 .19	10687 12473	----- 14530
81089	196	8/21	Montgomery---	6	11.38 Dry	37.05 41.81	40.98 46.24	10.59 11.95	4.26 4.81	.96 1.08	10832 12223	----- 14189
81090	196	8/21	Montgomery---	6	12.53 Dry	36.21 41.40	40.35 46.13	10.91 12.47	4.61 5.27	.85 .97	10705 12258	----- 14341
81091	196	8/21	Montgomery---	6	12.47 Dry	37.13 42.42	40.54 46.32	9.86 11.26	4.41 5.04	.40 .46	10861 12408	----- 14284
81097	197	8/21	Montgomery---	6	14.97 Dry	34.87 41.01	41.80 49.16	8.36 9.83	3.41 4.01	.44 .52	10697 12580	----- 14200
81098	197	8/21	Montgomery---	6	14.49 Dry	34.60 40.46	42.45 49.65	8.46 9.89	3.83 4.48	.36 .42	10643 12446	----- 14070
81099	197	8/21	Montgomery---	6	14.69 Dry	34.56 40.51	41.14 48.23	9.61 11.26	4.32 5.06	.47 .55	10425 12220	----- 14069
1661	<sup>31</sup> B. M. 43	5/05	Montgomery---	6	12.90 Dry	33.77 38.77	42.25 48.51	11.08 12.72	3.78 4.34	----- -----	10856 12463	----- 14599
1449	<sup>31</sup> B. M. 43	5/05	Montgomery---	6	14.89 Dry	34.80 40.89	42.44 49.86	7.87 9.25	3.61 4.24	----- -----	11016 12944	----- 14521
1450	<sup>31</sup> B. M. 43	5/05	Montgomery---	6	13.94 Dry	33.93 39.43	41.22 47.89	10.91 12.68	3.79 4.40	----- -----	----- -----	----- -----
1557	<sup>31</sup> B. M. 43	5/05	Montgomery---	6	14.43 Dry	29.48 34.45	42.81 50.03	13.28 15.52	4.01 4.69	----- -----	10064 11761	----- 14289

<sup>31</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 89, 1913.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
1702	<sup>31</sup> B. M. 43	5/05	Montgomery---	6	11.93 Dry	29.99 34.05	43.90 49.85	14.18 16.10	4.29 4.87	-----	10303 11698	----- 14329
1627	<sup>31</sup> B. M. 43	5/05	Montgomery---	6	13.20 Dry	34.33 39.55	39.94 46.01	12.53 14.44	4.47 5.15	-----	10514 12112	----- 14329
11352	<sup>32</sup> B. M. 44	11/10	Montgomery---	6	13.23 Dry	34.45 39.70	42.37 48.83	9.95 11.47	3.57 4.11	-----	-----	-----
11353	<sup>32</sup> B. M. 44	11/10	Montgomery---	6	12.99 Dry	32.86 37.77	40.33 46.35	13.82 15.88	4.06 4.67	-----	-----	-----
11354	<sup>32</sup> B. M. 44	11/10	Montgomery---	6	13.31 Dry	33.62 38.78	41.34 47.69	11.73 13.53	3.75 4.33	-----	10548 12168	----- 14394
21901	<sup>33</sup> B. M. 45	4/15	Montgomery---	6	14.87 Dry	33.42 39.26	40.70 47.81	11.01 12.93	3.26 3.83	-----	10478 12308	----- 14419
21902	<sup>33</sup> B. M. 45	4/15	Montgomery---	6	12.70 Dry	35.52 40.69	40.16 46.00	11.62 13.31	4.15 4.75	-----	10669 12220	----- 14432
21903	<sup>33</sup> B. M. 45	4/15	Montgomery---	6	13.04 Dry	34.06 39.17	39.58 45.51	13.32 15.32	4.84 5.57	-----	10301 11846	----- 14388
21904	<sup>33</sup> B. M. 45	4/15	Montgomery---	6	13.43 Dry	35.06 40.50	40.96 47.31	10.55 12.19	3.82 4.41	-----	10732 12398	----- 14425
21905	<sup>33</sup> B. M. 45	4/15	Montgomery---	6	13.31 Dry	34.86 40.21	40.42 46.63	11.41 13.16	4.02 4.64	-----	10620 12251	----- 14438
21906	<sup>33</sup> B. M. 46	4/15	Montgomery---	6	13.48 Dry	34.84 40.27	40.13 46.38	11.55 13.35	4.03 4.66	-----	10548 12191	----- 14402
5254	225	8/12	Moultrie-----	6	7.07 Dry	39.02 41.99	43.01 46.28	10.90 11.73	3.69 3.97	.36 .39	11912 12819	----- 14736
5255	225	8/12	Moultrie-----	6	7.18 Dry	38.09 41.03	41.38 44.59	13.35 14.38	5.18 5.58	.46 .49	11573 12468	----- 14973
5256	225	8/12	Moultrie-----	6	6.24 Dry	40.34 43.03	42.55 45.38	10.87 11.59	3.18 3.39	.89 .95	12149 12957	----- 14937
4756	54	3/12	Perry-----	6	10.32 Dry	34.03 37.94	46.19 51.51	9.46 10.55	1.07 1.18	.24 .26	11395 12705	----- 14380
4759	54	3/12	Perry-----	6	10.41 Dry	33.43 37.32	45.82 51.14	10.34 11.54	.88 1.04	.23 .25	11486 12822	----- 14367
4760	54	3/12	Perry-----	6	10.22 Dry	33.32 37.11	47.60 53.03	8.86 9.86	1.04 1.15	.23 .25	11270 12553	----- 14383
4764	54	3/12	Perry-----	6	9.98 Dry	33.71 37.45	44.91 49.88	11.40 12.67	.84 .93	.33 .37	11205 12447	----- 14452
4766	54	3/12	Perry-----	6	9.64 Dry	33.48 37.06	45.60 50.47	11.27 12.47	.82 .90	.35 .39	11230 12428	----- 14394
4768	54	3/12	Perry-----	6	10.05 Dry	33.24 36.94	45.85 50.98	10.86 12.08	.93 1.04	.63 .70	11257 12513	----- 14424
5034	90	6/12	Perry-----	6	10.60 Dry	37.03 41.42	42.32 47.35	10.05 11.23	3.73 4.17	.62 .70	11175 12500	----- 14365
5037	90	6/12	Perry-----	6	11.20 Dry	37.29 42.00	40.57 45.69	10.94 12.31	3.20 3.60	.34 .39	10911 12287	----- 14288

<sup>32</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 85, p. 37, 1914.  
<sup>33</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines, Bull. 123, p. 35, 1918.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5038	90	6/12	Perry	6	10.60 Dry	35.99 40.25	43.05 48.16	10.36 11.59	4.18 4.67	.47 .53	11012 12317	----- 14228
5040	90	6/12	Perry	6	11.60 Dry	37.03 41.89	42.17 47.71	9.20 10.40	3.84 4.34	.38 .43	11107 12570	----- 14301
5042	90	6/12	Perry	6	10.82 Dry	37.83 42.42	41.52 46.56	9.83 11.02	2.98 3.34	.76 .85	11210 12570	----- 14380
5043	90	6/12	Perry	6	10.89 Dry	36.81 41.29	41.23 46.27	11.07 12.44	3.71 4.16	.55 .52	10826 12277	----- 14319
5048	88	7/12	Perry	6	9.37 Dry	36.87 40.68	41.05 45.29	12.71 14.02	4.62 4.83	.43 .47	10936 12067	----- 14395
5049	88	7/12	Perry	6	9.34 Dry	37.97 41.88	41.32 45.58	11.37 12.54	3.16 3.48	1.42 1.56	11099 12243	----- 14276
5050	88	7/12	Perry	6	10.11 Dry	36.44 40.54	41.45 40.12	12.00 13.34	3.59 3.99	.75 .81	10915 12141	----- 14321
5514	89	8/12	Perry	6	12.43 Dry	35.55 40.59	42.86 48.94	9.16 10.47	4.80 5.48	.21 .25	11063 12632	----- 14422
5519	89	8/12	Perry	6	12.76 Dry	35.18 41.79	44.32 49.34	7.74 8.87	1.66 1.90	.15 .17	11357 13018	----- 14458
5520	89	8/12	Perry	6	12.17 Dry	36.42 41.46	42.41 48.28	9.00 10.26	1.96 2.23	.46 .52	11200 12753	----- 14414
12596	175	5/21	Perry	6	10.11 Dry	35.92 39.96	43.55 48.45	10.42 11.59	3.62 4.03	.56 .62	11661 12422	----- 14332
12597	175	5/21	Perry	6	10.16 Dry	35.53 39.55	44.84 49.91	9.47 10.54	3.46 3.85	.11 .12	11368 12654	----- 14405
12598	175	5/21	Perry	6	10.16 Dry	35.49 39.50	42.89 47.74	11.46 12.76	3.92 4.36	.42 .47	11041 12290	----- 14402
12574	176	5/21	Perry	6	9.26 Dry	39.03 43.01	42.31 46.63	9.40 10.36	3.38 3.73	.30 .33	11449 12617	----- 14328
12575	176	5/21	Perry	6	9.52 Dry	36.11 39.91	43.88 48.50	10.49 11.53	3.47 3.84	.35 .39	11330 12522	----- 14218
12576	176	5/21	Perry	6	10.01 Dry	36.39 40.44	43.99 48.88	9.61 10.68	3.87 3.19	.84 .84	11313 12572	----- 14314
12577	176	5/21	Perry	6	10.61 Dry	36.25 40.55	43.49 48.65	9.65 10.80	3.40 3.68	.50 .56	11125 12445	----- 14205
12578	176	5/21	Perry	6	10.14 Dry	35.55 39.56	43.07 47.93	11.24 12.51	3.49 3.89	.40 .45	10979 12218	----- 14257
12579	176	5/21	Perry	6	11.52 Dry	34.89 39.43	43.18 48.80	10.41 11.77	2.99 3.38	.51 .58	10887 12305	----- 14205
12595	177	5/21	Perry	6	9.45 Dry	35.01 38.66	41.93 46.31	13.61 15.03	3.84 4.24	.86 .95	10763 11886	----- 14334
12620	178	5/21	Perry	6	9.29 Dry	35.59 39.24	42.81 47.19	12.31 13.57	3.31 3.65	.32 .34	11019 12148	----- 14358
12621	178	5/21	Perry	6	10.19 Dry	34.23 38.12	40.62 46.34	13.96 15.54	5.43 6.05	.37 .40	10486 11676	----- 14359
12622	178	5/21	Perry	6	9.84 Dry	35.15 38.98	43.16 47.87	11.85 13.15	3.54 3.93	.28 .30	10942 12137	----- 14275

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
12664	179	6/21	Perry.....	6	8.79 Dry 40.47	36.91 47.48	43.31 47.48	10.99 12.05	3.43 3.76	.19 .21	11300 12201	14368
12665	179	6/21	Perry.....	6	8.88 Dry 41.51	37.82 46.89	42.73 46.89	10.57 11.60	3.38 3.71	.06 .06	11290 12204	14287
12623	180	6/21	Perry.....	6	8.29 Dry 37.74	34.61 52.54	48.18 52.54	8.92 9.72	1.07 1.17	.25 .27	11703 12761	14292
12624	180	6/21	Perry.....	6	8.91 Dry 36.53	33.28 51.72	47.11 51.72	10.70 11.75	.95 1.04	.05 .06	11355 12466	14311
12614	180	5/21	Perry.....	6	10.00 Dry 36.44	32.79 54.43	48.99 54.43	8.22 9.13	.77 .86	.12 .14	11570 12855	14288
12615	180	5/21	Perry.....	6	9.89 Dry 37.14	33.47 52.22	47.05 52.22	9.59 10.64	1.35 1.50	.43 .48	11424 12678	14372
12616	180	5/21	Perry.....	6	9.49 Dry 37.67	34.09 51.06	46.22 51.06	10.20 11.27	1.21 1.33	.18 .20	11432 12632	14425
31033	181	10/18	Perry.....	6	12.34 Dry 38.19	33.48 51.36	45.02 51.36	9.16 10.45	1.82 2.08	-----	11171 12744	14434
31034	181	10.18	Perry.....	6	12.19 Dry 38.90	34.16 50.68	44.50 50.68	9.15 10.42	1.32 1.50	-----	11245 12805	14479
31035	181	10/18	Perry.....	6	11.93 Dry 38.04	33.50 51.49	45.35 51.49	9.22 10.47	1.36 1.54	-----	11257 12782	14447
31036	181	10/18	Perry.....	6	11.86 Dry 38.72	34.13 50.64	44.63 50.64	9.38 10.64	1.46 1.66	-----	11236 12748	14426
12592	182	5/21	Perry.....	6	9.06 Dry 40.24	36.59 47.43	43.13 47.43	11.22 12.33	3.73 4.10	.37 .41	11126 12235	14246
12593	182	5/21	Perry.....	6	9.00 Dry 39.34	35.80 48.39	44.03 48.39	11.17 12.27	3.86 4.24	.46 .51	11097 12195	14194
12594	182	5/21	Perry.....	6	9.21 Dry 38.57	35.02 49.10	44.58 49.10	11.19 12.33	3.55 3.91	.40 .44	11194 12327	14350
12588	184	5/21	Perry.....	6	8.13 Dry 41.60	38.22 46.38	42.61 46.38	11.04 12.02	3.73 4.06	.58 .64	11296 12296	14262
12589	184	5/21	Perry.....	6	7.56 Dry 40.73	37.65 47.12	43.56 47.12	11.23 12.15	3.71 4.01	.52 .57	11336 12263	14245
12590	184	5/21	Perry.....	6	8.28 Dry 42.73	39.19 45.74	41.95 45.74	10.58 11.53	3.49 3.81	.43 .64	11406 12436	14329
12561	184	5/21	Perry.....	6	8.00 Dry 40.87	37.60 45.95	42.27 45.95	12.13 13.18	3.38 3.67	.57 .62	11124 12091	14218
20728	<sup>34</sup> B. M. 29	10/15	Perry.....	6	10.88 Dry 37.00	32.97 52.96	47.20 52.96	8.95 10.04	1.15 1.29	-----	11380 12769	14411
20729	<sup>34</sup> B. M. 29	10/15	Perry.....	6	10.20 Dry 36.84	33.08 55.26	49.63 55.26	7.09 7.90	.80 .89	-----	11749 13082	14329
20730	<sup>34</sup> B. M. 29	10/15	Perry.....	6	11.47 Dry 36.20	32.05 54.72	48.44 54.72	8.04 9.08	.92 1.04	-----	11446 12929	14368
20731	<sup>34</sup> B. M. 29	10/15	Perry.....	6	10.64 Dry 36.68	32.78 54.76	48.93 54.76	7.65 8.56	.68 .76	-----	11621 13005	14352

<sup>34</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 123, p. 35, 1918.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
20732	<sup>34</sup> B. M. 29	10/15	Perry-----	6	11.54 Dry	32.16 36.36	49.35 55.78	6.95 7.86	.85 .96	-----	11578 13088	----- 14332
20733	<sup>34</sup> B. M. 29	10/15	Perry-----	6	10.99 Dry	32.24 36.22	48.32 54.29	8.45 9.49	.72 .81	-----	11446 12859	----- 14340
20734	<sup>34</sup> B. M. 29	10/15	Perry-----	6	11.03 Dry	32.40 36.41	48.64 54.68	7.93 8.91	.86 .97	-----	11578 13010	----- 14426
26462	<sup>35</sup>	12/16	Perry-----	6	10.45 Dry	33.92 37.88	47.88 53.97	7.75 8.65	.83 .93	-----	11729 13097	----- 14476
26463	<sup>35</sup>	12/16	Perry-----	6	10.66 Dry	33.04 36.98	47.60 53.28	8.70 9.74	.82 .92	-----	11590 12973	----- 14529
26464	<sup>35</sup>	12/11	Perry-----	6	10.61 Dry	33.04 36.96	46.72 52.27	9.63 10.77	1.02 1.14	-----	11412 12767	----- 14485
26465	<sup>35</sup>	12/16	Perry-----	6	11.26 Dry	33.84 38.13	46.18 52.04	8.72 9.83	.80 .90	-----	11484 12942	----- 14509
26466	<sup>35</sup>	12/16	Perry-----	6	11.75 Dry	33.49 37.95	45.94 52.06	8.82 9.99	.78 .88	-----	11392 12908	----- 14497
26467	<sup>35</sup>	12/16	Perry-----	6	11.47 Dry	32.81 37.06	47.22 53.34	8.50 9.60	1.08 1.22	-----	11484 12973	----- 14514
26469	<sup>35</sup>	12/16	Perry-----	6	13.73 Dry	33.99 39.40	49.58 57.47	2.70 3.13	.77 .89	-----	12064 13984	----- 14542
5045	83	8/12	Randolph-----	6	11.38 Dry	36.94 41.68	40.25 45.41	11.43 12.91	4.16 4.69	.72 .81	10823 12212	----- 14348
5046	83	8/12	Randolph-----	6	10.62 Dry	38.10 42.63	39.12 43.77	12.16 13.60	4.45 4.98	.42 .47	10849 12137	----- 14400
5047	83	8/12	Randolph-----	6	11.39 Dry	36.80 41.53	41.04 46.32	10.77 12.15	4.11 4.63	.60 .67	10895 12294	----- 14306
12583	229	5/21	Randolph-----	6	8.46 Dry	37.00 40.42	44.26 48.35	10.28 11.23	3.69 4.03	.29 .32	11333 12381	----- 14219
12584	229	5/21	Randolph-----	6	8.71 Dry	37.46 41.04	42.94 47.04	10.89 11.92	4.45 4.88	.086 .094	11155 12220	----- 14181
12585	229	5/21	Randolph-----	6	8.00 Dry	38.05 41.36	43.63 47.42	10.32 11.22	3.69 4.01	.162 .176	11338 12324	----- 14149
12562	208	5/21	Randolph-----	6	9.54 Dry	36.55 40.41	43.35 47.92	10.56 11.67	3.21 3.55	.58 .64	11251 12438	----- 14349
12563	208	5/21	Randolph-----	6	9.52 Dry	37.01 40.90	40.86 45.16	12.61 13.94	4.90 5.42	.46 .51	10971 12125	----- 14463
12564	208	5/21	Randolph-----	6	9.69 Dry	37.31 41.31	41.70 46.17	11.30 12.52	4.15 4.59	.50 .55	11135 12330	----- 14412
12565	208	5/21	Randolph-----	6	11.07 Dry	36.15 40.65	41.17 46.30	11.61 13.05	2.90 3.47	.69 .78	10902 12259	----- 14373
12566	208	5/21	Randolph-----	6	10.58 Dry	35.65 39.86	39.85 44.57	13.92 15.57	3.20 3.58	.93 .98	10526 11772	----- 14273
12567	208	5/21	Randolph-----	6	10.65 Dry	36.25 40.57	40.89 45.76	12.21 13.67	4.32 4.84	.52 .58	10885 12182	----- 14458

<sup>35</sup> U. S. Bureau of Mines, unpublished analyses.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
12580	209	5/21	Randolph.....	6	10.35 Dry	37.35 41.75	41.41 46.30	10.69 11.95	3.73 4.17	.51 .57	10991 12287	----- 14244
12581	209	5/21	Randolph.....	6	8.95 Dry	36.48 40.06	41.87 45.99	12.70 13.95	4.72 5.19	.66 .73	10874 11943	----- 14233
12582	209	5/21	Randolph.....	6	9.44 Dry	36.89 40.73	42.42 46.84	11.25 12.43	4.31 4.76	.75 .83	11016 12165	----- 14205
12570	210	5/21	Randolph.....	6	9.62 Dry	36.49 40.37	42.58 47.11	11.31 12.52	3.61 3.99	.21 .23	11215 12409	----- 14485
12571	210	5/21	Randolph.....	6	9.03 Dry	37.38 41.09	43.63 47.96	9.96 10.95	3.42 3.76	.39 .43	11456 12593	----- 14408
12572	210	5/21	Randolph.....	6	9.27 Dry	35.55 39.18	43.78 48.25	11.40 12.57	3.10 3.42	.29 .32	11230 12378	----- 14439
12573	210	5/21	Randolph.....	6	9.42 Dry	35.40 39.08	41.85 46.20	13.33 14.72	3.91 4.32	.41 .45	10858 11987	----- 14404
5115	75	8/12	Sangamon.....	6	14.97 Dry	36.90 43.39	38.36 45.12	9.77 11.49	3.53 4.16	.57 .69	10598 12466	----- 14361
5116	75	8/12	Sangamon.....	6	14.51 Dry	37.60 43.98	39.69 46.43	8.20 9.59	3.44 4.02	.22 .25	10911 12763	----- 14373
5117	75	8/12	Sangamon.....	6	12.98 Dry	38.23 43.94	38.92 44.72	9.87 11.34	4.32 4.96	.56 .65	10845 12463	----- 14368
5130	74	7/12	Sangamon.....	6	15.22 Dry	38.23 45.09	37.36 44.07	9.19 10.84	4.38 5.17	.38 .45	10579 12478	----- 14301
5131	74	7/12	Sangamon.....	6	13.10 Dry	38.86 44.72	37.25 42.86	10.79 12.42	5.08 5.86	.41 .47	10592 12187	----- 14268
5132	74	7/12	Sangamon.....	6	14.43 Dry	38.14 44.58	37.07 43.32	10.36 12.10	4.77 5.58	.40 .47	10495 12265	----- 14292
81319	193	9/21	Sangamon.....	6	13.16 Dry	36.32 41.82	39.36 45.33	11.16 12.85	4.98 5.73	.51 .59	10553 12152	----- 14301
81320	193	9/21	Sangamon.....	6	13.25 Dry	36.73 42.34	40.75 46.97	9.27 10.69	3.53 4.07	.63 .73	10884 12546	----- 14314
81321	193	9/21	Sangamon.....	6	12.95 Dry	36.40 41.82	40.52 46.54	10.13 11.64	3.52 4.04	.56 .64	10817 12427	----- 14346
2897	<sup>36</sup> B. M. 42	2/06	Sangamon.....	6	14.29 Dry	37.17 43.37	40.36 47.09	8.18 9.54	4.41 5.15	-----	11007 12841	----- 14485
2898	<sup>36</sup> B. M. 42	2/06	Sangamon.....	6	14.18 Dry	34.85 40.61	41.11 47.90	9.86 11.49	4.36 5.08	-----	-----	-----
3052	<sup>6</sup> B. M. 42	2/06	Sangamon.....	6	16.00 Dry	32.41 38.58	37.82 45.03	13.77 16.39	4.05 4.82	-----	9640 11833	----- 14553
5056	79	7/12	St. Clair.....	6	10.69 Dry	40.16 44.97	37.87 42.39	11.28 12.64	4.55 5.10	.58 .65	11063 12387	----- 14522
5058	79	7/12	St. Clair.....	6	12.12 Dry	38.61 43.93	40.61 46.22	8.66 9.85	3.10 3.52	.35 .39	11217 12764	----- 14399
5059	79	7/12	St. Clair.....	6	11.12 Dry	40.54 45.61	38.27 43.06	10.07 11.33	4.18 4.70	.32 .36	11145 12540	----- 14483

<sup>36</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 91, 1913.



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5055	78	7/12	St. Clair-----	6	13.06 Dry	38.21 43.95	37.36 42.96	11.37 13.09	3.21 3.70	1.17 1.35	10741 12354	----- 14515
5060	78	7/12	St. Clair-----	6	11.44 Dry	38.73 43.73	38.11 43.04	11.72 13.23	4.26 4.81	.56 .64	10841 12242	----- 14447
5061	78	7/12	St. Clair-----	6	10.75 Dry	39.19 43.91	38.88 43.56	11.18 12.53	3.41 3.82	.67 .75	11041 12371	----- 14438
5077	81	7/12	St. Clair-----	6	11.35 Dry	39.68 44.75	38.59 43.54	10.38 11.71	4.05 4.57	.58 .65	11036 12449	----- 14404
5079	81	7/12	St. Clair-----	6	10.85 Dry	40.75 45.71	38.36 43.03	10.04 11.26	4.09 4.58	.58 .65	11192 12554	----- 14445
5080	81	7/12	St. Clair-----	6	11.50 Dry	40.68 45.96	37.91 42.84	9.91 11.20	3.96 4.47	.46 .52	10908 12597	----- 14482
5108	82	7/12	St. Clair-----	6	10.99 Dry	38.96 43.77	58.79 43.59	11.26 12.64	4.36 4.90	.36 .40	11047 12411	----- 14544
5109	82	7/12	St. Clair-----	6	13.42 Dry	39.23 45.31	36.92 42.65	10.43 12.04	4.92 5.69	.26 .31	10753 12419	----- 14474
5110	82	7/12	St. Clair-----	6	11.40 Dry	40.56 46.23	36.89 41.63	10.75 12.14	4.10 4.63	.57 .63	11052 12472	----- 14511
5524	80	7/12	St. Clair-----	6	10.11 Dry	39.72 44.19	38.87 43.24	11.30 12.57	3.69 4.10	.78 .86	11051 12294	----- 14361
5525	80	8/12	St. Clair-----	6	9.83 Dry	39.84 44.19	37.97 42.11	12.36 13.70	4.02 4.45	.87 .96	10958 12152	----- 14415
5526	80	8/12	St. Clair-----	6	10.19 Dry	38.44 42.79	40.41 45.00	10.96 12.21	3.95 4.49	.68 .78	11127 12388	----- 14418
80827	200	8/21	St. Clair-----	6	14.93 Dry	30.71 36.10	42.72 50.22	11.64 13.68	2.22 2.61	.24 .27	10340 12155	----- 14346
80828	200	8/21	St. Clair-----	6	12.71 Dry	31.53 36.12	45.31 51.91	10.45 11.97	1.65 1.89	.58 .66	10809 12383	----- 14282
80829	200	8/21	St. Clair-----	6	13.68 Dry	32.10 37.19	42.59 49.34	11.63 13.47	1.51 1.75	1.25 1.45	10573 12249	----- 14394
80823	201	8/21	St. Clair-----	6	11.64 Dry	37.40 42.33	41.80 47.30	9.16 10.37	3.66 4.14	.35 .40	11177 12649	----- 14376
80824	201	8/21	St. Clair-----	6	11.26 Dry	37.92 42.73	39.03 43.98	11.79 13.29	3.66 4.12	.67 .75	10931 12318	----- 14521
80825	201	8/21	St. Clair-----	6	12.08 Dry	37.02 42.10	41.58 47.30	9.32 10.60	3.77 4.29	.17 .19	11153 12685	----- 14715
12536	202	5/21	St. Clair-----	6	11.45 Dry	37.39 42.22	38.66 43.66	12.50 14.12	5.21 5.88	.32 .36	10739 12128	----- 14517
12537	202	5/21	St. Clair-----	6	10.65 Dry	35.54 39.77	40.93 45.81	12.88 14.42	4.21 4.71	.88 .93	10782 12067	----- 14459
12538	202	5/21	St. Clair-----	6	11.17 Dry	39.20 44.13	39.20 44.13	10.43 11.74	4.44 5.00	.31 .35	11073 12465	----- 14444
12541	203	5/21	St. Clair-----	6	9.72 Dry	39.13 43.34	40.02 44.33	11.13 12.33	4.87 5.39	.72 .80	11228 12437	----- 14534
12542	203	5/21	St. Clair-----	6	9.26 Dry	40.97 45.15	39.09 43.08	10.68 11.77	4.36 4.80	.53 .59	11308 12462	----- 14438

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
12543	203	5/21	St. Clair.....	6	11.17 Dry	39.71 44.70	37.52 42.24	11.60 13.06	4.63 5.21	.69 .78	10826 12187	----- 14362
12544	203	5/21	St. Clair.....	6	10.59 Dry	39.83 44.54	39.99 44.73	9.59 10.73	4.09 4.57	.32 .36	11103 12419	----- 14192
12545	203	5/21	St. Clair.....	6	11.33 Dry	39.64 44.70	39.04 44.03	9.99 11.27	3.59 4.05	.18 .20	11153 12578	----- 14458
12546	203	5/21	St. Clair.....	6	10.00 Dry	40.32 44.80	40.28 44.76	9.40 10.44	4.43 4.92	.55 .61	11386 12651	----- 14422
12559	204	5/21	St. Clair.....	6	11.52 Dry	37.20 42.05	41.67 47.09	9.61 10.86	2.82 3.19	.10 .10	11155 12607	----- 14394
12556	205	5/21	St. Clair.....	6	10.39 Dry	36.91 41.19	41.73 46.57	10.97 12.24	2.89 3.23	.74 .83	11004 12280	----- 14255
12557	205	5/21	St. Clair.....	6	9.26 Dry	37.77 41.62	41.08 45.27	11.89 13.11	3.01 3.32	.37 .41	11170 12310	----- 14438
12558	205	5/21	St. Clair.....	6	9.36 Dry	37.18 41.02	40.86 45.08	12.60 13.90	4.02 4.44	.55 .61	10959 12091	----- 14378
4250	<sup>37</sup> B. M. 49	11/06	St. Clair.....	6	13.17 Dry	34.79 40.07	41.75 48.08	10.29 11.85	3.22 3.71	-----	-----	-----
4251	<sup>38</sup> B. M. 49	11/06	St. Clair.....	6	14.38 Dry	33.92 39.62	42.95 50.16	8.75 10.22	3.13 3.66	-----	10858 12681	----- 14373
4376	<sup>38</sup> B. M. 49	11/06	St. Clair.....	6	13.10 Dry	32.16 37.01	41.49 47.74	13.25 15.25	3.66 4.21	-----	10363 11959	----- 14465
1095	<sup>39</sup> B. M. 50	9/04	St. Clair.....	6	11.17 Dry	39.31 44.25	39.20 44.13	10.32 11.62	4.22 4.75	-----	11223 12634	----- 14610
1096	<sup>39</sup> B. M. 50	9/04	St. Clair.....	6	10.06 Dry	40.33 44.84	39.54 43.96	10.07 11.20	4.04 4.49	-----	-----	-----
1261	<sup>39</sup> B. M. 50	9/04	St. Clair.....	6	9.75 Dry	37.48 41.53	39.57 43.84	13.20 14.63	4.10 4.54	-----	11025 12217	----- 14672
1152	<sup>39</sup> B. M. 50	9/04	St. Clair.....	6	12.03 Dry	31.86 36.22	33.67 38.27	22.44 25.51	4.00 4.55	-----	9149 10400	----- 14541
3910	<sup>39</sup> B. M. 51	10/06	St. Clair.....	6	10.73 Dry	39.60 44.36	40.41 45.27	9.26 10.37	4.12 4.62	-----	-----	-----
3912	<sup>39</sup> B. M. 51	10/06	St. Clair.....	6	9.88 Dry	42.26 46.89	37.05 41.12	10.81 11.99	3.83 4.25	-----	11439 12694	----- 14733
4364	<sup>39</sup> B. M. 51	10/06	St. Clair.....	6	11.69 Dry	35.70 40.43	39.42 44.63	13.19 14.94	4.38 4.96	-----	10699 12116	----- 14624
4670	93	2/12	Vermilion.....	6	13.68 Dry	36.28 42.03	41.37 47.92	8.67 10.05	2.78 3.23	.45 .52	11101 12861	----- 14537
4671	93	2/12	Vermilion.....	6	15.50 Dry	33.32 39.43	43.11 51.03	8.07 9.54	1.86 2.20	.46 .62	10976 12989	----- 14558
4674	93	2/12	Vermilion.....	6	15.69 Dry	34.52 40.95	42.22 50.07	7.57 8.98	1.56 1.85	.53 .63	11019 13085	----- 14553

<sup>37</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 89, 1913.<sup>38</sup> Ibid., p. 90.<sup>39</sup> Ibid., p. 89.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
4676	93	2/12	Vermilion-----	6	14.56 Dry	35.04 41.01	41.82 48.95	8.58 10.04	2.09 2.45	.74 .86	11006 12881	----- 14527
4678	93	2/12	Vermilion-----	6	16.06 Dry	34.67 41.32	40.75 48.53	8.52 10.15	1.79 2.14	.90 1.07	10810 12879	----- 14537
4679	93	2/12	Vermilion-----	6	15.95 Dry	34.66 41.23	42.06 50.05	7.33 8.72	1.41 1.68	.39 .46	11041 13136	----- 14557
4702	92	3/12	Vermilion-----	6	15.53 Dry	33.60 39.78	39.46 46.70	11.41 13.52	2.32 2.75	.98 1.15	10404 12317	----- 14520
4703	92	3/12	Vermilion-----	6	15.70 Dry	32.38 38.81	39.80 47.72	11.36 13.47	2.57 3.04	1.06 1.26	10392 12328	----- 14535
4704	92	3/12	Vermilion-----	6	15.27 Dry	33.98 40.10	40.88 48.24	9.87 11.66	2.26 2.66	.69 .81	10718 12649	----- 14563
4706	95	3/12	Vermilion-----	6	11.87 Dry	40.37 45.80	39.52 44.86	8.24 9.34	3.07 3.48	.74 .84	11416 12953	----- 14525
4707	95	3/12	Vermilion-----	6	13.14 Dry	38.81 44.69	38.11 43.87	9.94 11.44	4.18 4.82	.88 1.02	10949 12604	----- 14549
4740	91	6/12	Vermilion-----	6	13.58 Dry	35.20 40.73	39.83 46.09	11.39 13.18	3.19 3.69	.83 .96	10821 12521	----- 14733
4741	91	6/12	Vermilion-----	6	13.63 Dry	34.56 40.01	41.19 47.69	10.62 12.30	2.91 3.36	.78 .90	10954 12683	----- 14747
4742	91	6/12	Vermilion-----	6	14.50 Dry	35.98 42.09	40.49 47.35	9.03 10.56	2.43 2.83	.44 .52	11090 12971	----- 14740
4743	91	6/12	Vermilion-----	6	14.20 Dry	35.79 41.71	42.05 49.01	7.96 9.28	1.83 2.13	.34 .39	11295 13165	----- 14703
4744	91	6/12	Vermilion-----	6	13.93 Dry	35.26 40.99	42.68 49.63	8.07 9.38	1.67 1.94	.98 1.14	11271 13104	----- 14706
4745	91	6/12	Vermilion-----	6	14.79 Dry	34.44 40.42	42.69 50.10	8.08 9.48	1.72 2.02	.98 1.15	11053 12971	----- 14519
4746	91	6/12	Vermilion-----	6	15.14 Dry	33.70 39.72	40.19 47.34	10.97 12.94	2.50 2.95	.61 .72	10663 12565	----- 14712
84222	212	2/22	Vermilion-----	6	13.6 Dry	34.0 39.3	42.6 49.5	9.8 11.2	2.4 2.8	.83 .96	11020 12750	----- 14601
84223	212	2/22	Vermilion-----	6	13.8 Dry	35.2 40.8	41.3 48.0	9.7 11.2	2.7 3.1	.69 .80	11010 12760	----- 14620
84224	212	2/22	Vermilion-----	6	15.3 Dry	32.8 38.7	44.1 52.1	7.8 9.2	1.8 2.1	.80 .94	11100 13110	----- 14627
14682	<sup>40</sup> B. M. 53	/10	Vermilion-----	6	16.16 Dry	34.09 40.66	39.19 46.75	10.56 12.59	1.74 2.08	----- -----	10433 12443	----- 14472
25413	<sup>41</sup> B. M. 54	6/16	Vermilion-----	6	15.62 Dry	35.59 42.18	39.97 47.37	8.82 10.45	1.68 1.99	----- -----	10845 12852	----- 14554
5030	86	6/12	Washington-----	6	12.45 Dry	37.22 42.03	39.81 44.96	11.52 13.01	3.62 4.09	.67 .76	10874 12281	----- 14426
5033	86	6/12	Washington-----	6	10.24 Dry	39.06 43.51	39.79 44.33	10.91 12.16	4.18 4.65	.30 .34	11180 12456	----- 14499

<sup>40</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 85, p. 37, 1914.<sup>41</sup> Fieldner, A. C., and others, Analyses of coal: U. S. Bureau of Mines Bull. 123, p. 35, 1918.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5035	86	6/12	Washington	6	10.69 Dry	38.76 43.41	36.01 43.66	11.54 12.93	3.98 4.47	.51 .57	10963 12275	14418
80680	226	8/21	Washington	6	9.58 Dry	38.50 42.58	39.87 44.09	12.05 13.33	4.63 5.12	.49 .54	10906 12061	14260
80681	226	8/21	Washington	6	8.41 Dry	39.02 43.07	40.33 44.52	11.24 12.41	3.59 3.96	.41 .45	11172 12333	14374
80682	226	8/21	Washington	6	9.29 Dry	38.45 42.39	38.94 42.93	13.32 14.68	4.70 5.18	.66 .73	10796 11902	14321
80594	228	7/21	White	6	8.20 Dry	34.68 37.78	48.79 53.15	8.33 9.07	2.93 3.19	.73 .80	12079 13158	14700
80595	228	7/21	White	6	7.66 Dry	36.01 39.08	45.62 49.51	10.51 11.41	2.75 2.98	.96 1.04	11701 12699	14586
80596	228	7/21	White	6	9.22 Dry	35.05 38.61	47.88 52.74	7.85 8.65	2.89 3.18	.23 .25	11991 13209	14677
4998	65	6/12	Williamson	6	9.35 Dry	32.83 36.21	50.07 55.24	7.75 8.55	1.05 1.16	.26 .29	12017 13256	14644
5004	65	6/12	Williamson	6	9.99 Dry	33.79 37.53	48.56 53.96	7.66 8.51	.99 1.10	.06 .06	11899 13218	14593
5005	65	6/12	Williamson	6	8.58 Dry	33.95 37.14	48.31 52.84	9.16 10.02	3.10 3.39	.14 .16	11845 12956	14644
4996	60	6/12	Williamson	6	8.32 Dry	34.61 37.75	47.56 51.88	9.51 10.37	2.25 2.46	.24 .26	11978 13066	14801
5000	60	6/12	Williamson	6	7.53 Dry	34.90 37.74	47.37 51.23	10.20 11.03	3.23 3.49	.60 .65	11799 12760	14607
5006	60	6/12	Williamson	6	8.81 Dry	32.13 35.62	51.85 56.38	7.21 8.00	1.00 1.11	.13 .16	11962 13264	14572
5121	61	6/12	Williamson	6	9.44 Dry	33.63 37.13	49.58 54.75	7.35 8.12	1.28 1.42	.19 .21	12092 13354	14685
5133	61	7/12	Williamson	6	8.99 Dry	34.22 37.62	49.51 54.39	7.28 7.99	1.70 1.87	.04 .04	12149 13349	14674
5134	61	7/12	Williamson	6	9.38 Dry	33.62 37.10	50.01 55.18	6.99 7.72	1.12 1.24	.14 .16	12138 13394	14654
5122	59	7/12	Williamson	6	9.79 Dry	33.28 36.89	48.66 53.94	8.27 9.17	1.32 1.46	.44 .49	11891 13181	14681
5123	59	7/12	Williamson	6	10.67 Dry	32.54 36.42	47.32 52.97	9.47 10.61	1.53 1.71	.15 .17	11619 13006	14748
5124	59	7/12	Williamson	6	10.96 Dry	33.14 37.24	45.86 51.49	10.04 11.27	1.72 1.93	.55 .62	11383 12784	14624
5125	62	7/12	Williamson	6	9.97 Dry	32.20 35.76	49.62 55.12	8.21 9.12	1.47 1.63	.22 .25	11814 13123	14610
5126	62	7/12	Williamson	6	8.37 Dry	34.19 37.31	50.18 54.77	7.26 7.92	1.03 1.12	.18 .20	12254 13374	14663
5127	62	7/12	Williamson	6	9.06 Dry	32.93 36.20	49.98 54.97	8.03 8.83	1.03 1.13	.24 .27	12010 13207	14637
5170	64	7/12	Williamson	6	11.51 Dry	30.75 34.76	49.74 56.20	8.00 9.04	.84 .90	.32 .36	11554 13057	14501



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
5169	64	7/12	Williamson-----	6	9.13 Dry	32.03 35.25	51.06 56.20	7.77 8.55	1.10 1.21	.33 .36	12044 13254	----- 14613
5172	64	7/12	Williamson-----	6	7.38 Dry	35.59 38.42	47.56 51.35	9.47 10.23	.86 .93	.51 .55	12017 12974	----- 14617
5180	63	7/12	Williamson-----	6	10.38 Dry	32.76 36.56	48.10 53.67	8.76 9.77	1.50 1.67	.16 .18	11735 13072	----- 14672
5181	63	7/12	Williamson-----	6	8.78 Dry	34.25 37.54	47.56 52.14	9.41 10.32	2.49 2.73	.53 .58	11885 13029	----- 14758
5182	63	7/12	Williamson-----	6	9.26 Dry	33.36 36.76	48.70 53.68	8.68 9.56	1.83 2.01	.43 .39	11955 13176	----- 14761
80603	148	7/21	Williamson-----	6	8.00 Dry	33.66 36.59	50.86 55.29	7.48 8.13	1.08 1.17	.13 .14	12266 13333	----- 14655
80602	148	7/21	Williamson-----	6	8.14 Dry	32.87 35.78	49.99 54.42	9.00 9.80	1.43 1.56	.14 .16	12015 13080	----- 14681
80604	148	7/21	Williamson-----	6	7.85 Dry	33.92 36.81	49.60 53.83	8.63 9.36	1.14 1.24	.18 .20	12107 13138	----- 14656
80611	149	7/21	Williamson-----	6	5.62 Dry	36.04 38.19	44.78 47.44	13.56 14.37	4.21 4.46	.69 .81	11621 12313	----- 14738
80610	149	7/21	Williamson-----	6	5.65 Dry	36.49 38.68	47.69 50.54	10.17 10.78	3.54 3.75	.55 .62	12100 12825	----- 14644
80612	149	7/21	Williamson-----	6	7.66 Dry	32.76 35.48	51.12 55.36	8.46 9.16	1.51 1.64	.05 .06	12074 13076	----- 14621
12793	150	6/21	Williamson-----	6	6.14 Dry	34.47 36.73	48.04 51.18	11.35 12.09	3.57 3.80	.25 .27	11722 12489	----- 14494
12794	150	6/21	Williamson-----	6	5.96 Dry	35.07 37.29	47.56 50.57	11.41 12.14	4.37 4.65	.07 .07	11791 12538	----- 14561
12795	150	6/21	Williamson-----	6	5.85 Dry	35.46 37.66	47.48 50.43	11.11 11.81	4.06 4.31	.46 .48	11845 12581	----- 14568
80615	151	7/21	Williamson-----	6	7.15 Dry	37.17 40.03	46.55 50.14	9.13 9.83	3.03 3.26	.11 .12	12028 12954	----- 14603
80614	151	7/21	Williamson-----	6	6.33 Dry	36.22 38.67	46.84 50.00	10.61 11.33	3.29 3.51	.04 .05	11900 12704	----- 14597
80616	151	7/21	Williamson-----	6	7.25 Dry	35.84 38.64	47.88 51.62	9.03 9.74	2.04 2.20	.16 .17	12118 13065	----- 14675
12769	152	6/21	Williamson-----	6	6.76 Dry	31.08 33.33	52.76 56.59	9.40 10.08	1.16 1.24	.13 .14	12128 13007	----- 14639
12770	152	6/21	Williamson-----	6	7.19 Dry	32.65 35.18	50.12 54.00	10.04 10.82	1.36 1.47	.75 .81	11928 12778	----- 14603
12771	152	6/21	Williamson-----	6	7.14 Dry	33.07 35.61	52.02 56.02	7.77 8.37	1.44 1.55	.05 .05	12297 13242	----- 14610
30372	153	10/18	Williamson-----	6	9.13 Dry	32.21 35.45	47.97 52.79	10.69 11.76	.80 .98	-----	11500 12656	----- 14543
30873	153	10/18	Williamson-----	6	8.84 Dry	32.52 35.67	49.81 54.64	8.83 9.69	1.09 1.20	-----	11873 13023	----- 14584
30874	153	9/18	Williamson-----	6	9.75 Dry	33.36 36.96	51.37 56.92	5.52 6.12	.88 .98	-----	12280 13606	----- 14601



TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
30875	153	10/18	Williamson-----	6	10.82 Dry	31.11 34.88	49.02 54.97	9.05 10.15	.88 .99	-----	11646 13059	14700
12799	154	6/21	Williamson-----	6	7.75 Dry	31.88 34.56	51.20 55.50	9.17 9.94	1.45 1.57	.18 .20	11987 12994	14611
12800	154	6/21	Williamson-----	6	8.53 Dry	32.12 35.11	52.30 57.18	7.05 7.71	1.13 1.23	.17 .19	12253 13396	14654
12801	154	6/21	Williamson-----	6	7.42 Dry	32.85 35.48	50.39 54.43	9.34 10.09	1.01 1.09	.18 .20	12084 12997	14687
12752	155	6/21	Williamson-----	6	7.83 Dry	32.54 35.30	51.91 56.32	7.72 8.38	1.35 1.47	.14 .16	12092 13045	14471
12753	155	6/21	Williamson-----	6	7.51 Dry	34.23 37.01	50.61 54.72	7.65 8.27	1.28 1.38	.15 .17	12179 13099	14504
12754	155	6/21	Williamson-----	6	9.29 Dry	31.49 34.72	50.75 55.94	8.47 9.34	.93 1.03	.15 .16	11781 12387	14480
12822	156	6/21	Williamson-----	6	8.38 Dry	31.25 39.11	53.08 57.93	7.29 7.96	1.12 1.22	.05 .05	12067 13171	14449
12823	156	6/21	Williamson-----	6	9.18 Dry	31.10 34.25	52.33 57.61	7.39 8.14	1.32 1.45	.16 .18	11956 13164	14468
12824	156	6/21	Williamson-----	6	8.71 Dry	31.98 35.03	52.07 57.04	7.24 7.93	.94 1.03	.12 .14	12062 13213	14483
12841	156	6/21	Williamson-----	6	7.42 Dry	37.81 34.36	53.51 57.80	7.26 7.84	1.22 1.32	.07 .07	12250 13166	14500
12842	156	6/21	Williamson-----	6	7.53 Dry	32.41 35.05	53.65 58.34	6.11 6.61	2.41 2.61	.22 .24	12416 13297	14543
80598	157	7/21	Williamson-----	6	7.19 Dry	35.82 38.59	47.55 51.24	9.44 10.17	2.90 3.12	.26 .28	12074 13009	14722
80599	157	7/21	Williamson-----	6	8.17 Dry	35.03 38.15	46.87 51.04	9.93 10.81	3.08 3.35	.29 .30	11893 12951	14782
80600	157	7/21	Williamson-----	6	9.25 Dry	32.70 36.03	50.57 55.73	7.48 8.24	1.52 1.67	.17 .19	12056 13285	14650
12819	158	6/21	Williamson-----	6	7.47 Dry	32.15 34.75	51.38 55.52	9.00 9.73	2.37 2.56	.32 .35	11885 12845	14551
12820	158	6/21	Williamson-----	6	8.24 Dry	30.97 33.75	51.39 56.10	9.40 10.25	2.75 3.00	.00 .00	11776 12683	14531
12821	158	6/21	Williamson-----	6	9.91 Dry	30.11 33.42	52.87 58.69	7.11 7.89	1.55 1.72	.02 .02	11923 13148	14523
12796	159	6/21	Williamson-----	6	7.79 Dry	32.17 34.89	52.09 56.49	7.95 8.62	1.72 1.87	.06 .06	12157 13184	14599
12797	159	6/21	Williamson-----	6	6.89 Dry	37.72 36.22	48.39 51.96	11.00 11.81	3.99 4.29	.25 .27	11768 12424	14635
12798	159	6/21	Williamson-----	6	8.10 Dry	30.89 33.61	50.72 55.19	10.29 11.20	3.62 3.94	.09 .09	11717 12553	14642
12868	160	7/21	Williamson-----	6	8.81 Dry	31.54 34.59	50.60 55.49	9.05 9.92	1.46 1.60	.06 .06	11783 12841	14524
12869	160	7/21	Williamson-----	6	8.52 Dry	31.66 34.61	52.11 56.96	7.71 8.43	1.17 1.29	.09 .09	12094 13155	14586

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit cal
					Moisture	Volatile matter	Fixed carbon	Ash				
12870	160	7/21	Williamson-----	6	6.88 Dry	34.57 37.12	49.39 53.04	9.16 9.84	3.79 4.07	.02 .02	12022 12706	----- 14582
28810	161	7/17	Williamson-----	6	8.31 Dry	32.40 35.34	50.75 55.35	8.54 9.31	1.33 1.45	-----	11965 13048	----- 14553
28811	161	8/17	Williamson-----	6	9.13 Dry	31.48 34.64	51.00 56.13	8.39 9.23	.97 1.07	-----	11822 13010	----- 14485
28812	161	7/17	Williamson-----	6	8.82 Dry	35.15 38.55	47.90 52.53	8.13 8.92	1.07 1.17	-----	11965 13122	----- 14557
28813	161	7/17	Williamson-----	6	9.31 Dry	32.93 36.31	49.63 54.73	8.13 8.96	.82 .90	-----	11902 13124	----- 14559
28814	161	7/17	Williamson-----	6	9.78 Dry	33.08 36.67	49.93 55.34	7.21 7.99	.75 .83	-----	11965 13262	----- 14541
30863	162	9/18	Williamson-----	6	9.72 Dry	32.84 36.38	50.65 56.10	6.79 7.52	.96 1.06	-----	12026 13322	----- 14533
30864	162	9/18	Williamson-----	6	9.40 Dry	34.38 37.95	47.35 52.26	8.87 9.79	1.28 1.41	-----	11801 13027	----- 14614
30865	162	9/18	Williamson-----	6	10.58 Dry	32.47 36.31	46.30 51.78	10.65 11.91	1.57 1.76	-----	11322 12661	----- 14590
13540	163	3/22	Williamson-----	6	6.63 Dry	36.47 39.06	47.40 50.77	9.49 10.17	3.06 3.30	-----	12133 12995	----- 14713
13543	163	3/22	Williamson-----	6	7.59 Dry	33.61 36.37	49.25 53.29	9.55 10.34	2.72 2.94	-----	11974 12958	----- 14687
13544	163	3/22	Williamson-----	6	6.01 Dry	35.21 37.46	47.68 50.73	11.10 11.81	3.54 3.77	-----	11867 12526	----- 14484
13542	163	3/22	Williamson-----	6	7.11 Dry	34.56 37.20	46.85 50.44	11.48 12.35	2.89 3.11	-----	11668 12561	----- 14603
13539	163	3/22	Williamson-----	6	6.49 Dry	35.49 37.95	46.95 50.21	11.07 11.84	3.49 3.73	-----	11821 12641	----- 14621
13541	163	3/22	Williamson-----	6	5.93 Dry	34.60 36.78	47.58 50.58	11.89 12.64	3.27 3.48	-----	11788 12532	----- 14637
13538	164	3/22	Williamson-----	6	7.31 Dry	34.18 36.88	46.48 50.15	12.02 12.97	3.07 3.31	-----	11635 12553	----- 14726
80653	165	8/21	Williamson-----	6	6.51 Dry	34.93 37.36	46.12 49.33	12.44 13.31	4.21 4.50	1.01 1.08	11697 12511	----- 14773
80652	165	8/21	Williamson-----	6	8.79 Dry	32.97 36.15	48.73 53.42	9.51 10.43	1.61 1.77	.60 .66	11819 12958	----- 14663
80651	165	8/21	Williamson-----	6	8.82 Dry	31.24 34.26	52.45 57.53	7.49 8.21	.92 1.01	.49 .54	12047 13212	----- 14530
12838	166	6/21	Williamson-----	6	7.85 Dry	32.46 35.23	49.17 53.36	10.52 11.41	3.03 3.28	.82 .88	11675 12508	----- 14564
12839	166	6/21	Williamson-----	6	8.08 Dry	32.30 35.14	50.78 55.24	8.84 9.62	2.00 2.18	.21 .23	11867 12801	----- 14479
12840	166	6/21	Williamson-----	6	6.47 Dry	33.63 35.96	48.02 51.34	11.88 12.70	3.57 3.71	.64 .69	11659 12279	----- 14578
12875	167	7/21	Williamson-----	6	8.10 Dry	31.22 33.97	53.02 57.69	7.66 8.34	1.15 1.25	.13 .14	12156 13164	----- 14555

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit cal
					Moisture	Volatile matter	Fixed carbon	Ash				
12876	167	7/21	Williamson-----	6	8.79 Dry	32.42 35.54	48.41 53.08	10.38 11.38	1.59 1.74	.48 .53	11573 12688	----- 14524
12877	167	7/21	Williamson-----	6	6.47 Dry	34.62 37.01	49.61 53.05	9.30 9.94	2.92 3.12	.20 .22	12046 12723	----- 14533
12881	168	7/21	Williamson-----	6	5.00 Dry	37.42 39.39	46.61 49.06	10.97 11.55	3.13 3.29	.28 .30	12108 12580	----- 14676
12882	168	7/21	Williamson-----	6	4.94 Dry	36.99 38.91	46.71 49.14	11.36 11.95	3.39 3.57	.44 .46	12106 12557	----- 14750
12883	168	7/21	Williamson-----	6	5.73 Dry	35.37 37.52	44.97 47.71	13.93 14.77	4.17 4.42	.36 .38	11514 12215	----- 14695
12772	169	6/21	Williamson-----	6	5.48 Dry	36.28 38.38	47.15 49.89	11.09 11.73	3.78 4.00	.61 .65	11879 12568	----- 14545
12773	169	6/21	Williamson-----	6	5.88 Dry	35.63 37.86	46.19 49.07	12.30 13.07	3.77 4.01	.45 .47	11631 12158	----- 14529
12774	169	6/21	Williamson-----	6	6.95 Dry	34.41 36.98	48.47 52.09	10.17 10.93	4.02 4.32	.03 .03	11848 12517	----- 14585
80625	170	7/21	Williamson-----	6	6.40 Dry	36.71 39.22	47.70 50.96	9.19 9.82	3.41 3.64	.04 .04	12150 12981	----- 14644
80626	171	7/21	Williamson-----	6	7.29 Dry	34.93 37.68	47.65 51.39	10.13 10.93	3.78 4.08	.04 .04	11745 12669	----- 14334
80670	172	8/21	Williamson-----	6	6.40 Dry	36.38 38.87	48.20 51.49	9.02 9.64	3.45 3.69	.04 .04	12179 13012	----- 14648
80673	173	8/21	Williamson-----	6	7.14 Dry	35.39 38.11	44.61 48.04	12.86 13.85	4.35 4.68	.63 .68	11481 12364	----- 14708
80671	173	8/21	Williamson-----	6	6.24 Dry	36.41 38.83	44.45 47.41	12.90 13.76	3.56 3.80	.90 .96	11672 12449	----- 14761
80672	173	8/21	Williamson-----	6	7.49 Dry	36.37 39.31	46.95 50.76	9.19 9.93	2.73 2.95	.04 .04	12080 13058	----- 14894
10632	<sup>42</sup> 174	-----	Williamson-----	6	6.40 Dry	33.26 35.53	50.68 54.15	9.66 10.32	2.29 2.45	-----	12109 12936	----- 14642
10658	<sup>42</sup> 174	2/19	Williamson-----	6	7.47 Dry	33.79 36.52	49.41 53.39	9.33 10.09	1.77 1.92	-----	11970 12933	----- 14578
13537	227	3/22	Williamson-----	6	9.09 Dry	31.33 34.15	52.10 56.69	8.42 9.16	1.09 1.20	-----	11999 13199	----- 14688
1683	<sup>43</sup> B. M. 23	6/05	Williamson-----	6	8.29 Dry	31.19 34.01	49.69 54.18	10.83 11.81	2.81 3.06	-----	11837 12906	----- 14903
1688	<sup>43</sup> B. M. 23	6/05	Williamson-----	6	8.41 Dry	34.27 37.42	45.44 49.61	11.88 12.57	3.63 3.96	-----	-----	-----
1762	<sup>43</sup> B. M. 23	6/05	Williamson-----	6	8.20 Dry	32.26 35.14	46.59 50.75	12.95 14.11	3.48 3.79	-----	11362 12377	----- 14564

<sup>42</sup> Analyses of a sample of forked coal.<sup>43</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 91, 1913.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
3907	<sup>43</sup> B. M. 23	6/05	Williamson.....	6	12. 61 Dry	30.08 34. 42	46. 81 53. 56	10. 50 12. 02	2. 37 2. 71	----- -----	11066 12663	----- 14645
4083	<sup>43</sup> B. M. 23	6/05	Williamson.....	6	15. 31 Dry	28. 33 34. 16	45. 29 53. 48	10. 47 12. 36	2. 31 2. 74	----- -----	10820 12776	----- 14843
4201	<sup>43</sup> B. M. 23	6/05	Williamson.....	6	15. 87 Dry	28. 19 33. 51	46. 42 55. 17	9. 52 11. 32	2. 34 2. 78	----- -----	10784 12818	----- 14699
1634	<sup>43</sup> B. M. 24	5/05	Williamson.....	6	8. 30 Dry	33. 75 36. 80	48. 69 53. 10	9. 26 10. 10	2. 82 3. 08	----- -----	11999 13084	----- 14795
1654	<sup>43</sup> B. M. 24	5/05	Williamson.....	6	7. 76 Dry	31. 44 34. 08	50. 19 54. 42	10. 61 11. 50	1. 97 2. 14	----- -----	11957 12964	----- 14876
1660	<sup>44</sup> B. M. 24	5/05	Williamson.....	6	8. 86 Dry	31. 25 34. 29	48. 23 52. 92	11. 66 12. 73	2. 46 2. 70	----- -----	11702 12839	----- 14996
1718	<sup>44</sup> B. M. 24	5/05	Williamson.....	6	8. 61 Dry	32. 40 35. 45	51. 33 56. 17	7. 66 8. 38	1. 65 1. 81	----- -----	12236 13388	----- 14782
1653	<sup>45</sup> B. M. 24	5/05	Williamson.....	6	7. 64 Dry	32. 12 34. 78	49. 80 53. 92	10. 44 11. 30	2. 01 2. 18	----- -----	11939 12928	----- 14802
1802	<sup>45</sup> B. M. 24	5/05	Williamson.....	6	10. 14 Dry	30. 99 34. 49	51. 43 57. 23	7. 44 8. 28	1. 52 1. 69	----- -----	12116 13482	----- 14863
5238	<sup>45</sup> B. M. 24	6/07	Williamson.....	6	9. 18 Dry	27. 30 30. 06	55. 40 61. 00	8. 12 8. 94	. 90 . 99	----- -----	12015 13230	----- 14675
5215	<sup>45</sup> B. M. 24	6/07	Williamson.....	6	7. 88 Dry	31. 20 33. 87	49. 89 54. 16	11. 03 11. 97	2. 89 3. 25	----- -----	11741 12746	----- 14754
1731	<sup>45</sup> B. M. 25	6/05	Williamson.....	6	9. 37 Dry	30. 69 33. 86	52. 57 58. 01	7. 37 8. 13	1. 25 1. 38	----- -----	12058 13306	----- 14633
1732	<sup>45</sup> B. M. 25	6/05	Williamson.....	6	8. 59 Dry	31. 07 33. 99	53. 37 58. 38	6. 97 7. 63	1. 78 1. 95	----- -----	----- -----	----- -----
1820	<sup>45</sup> B. M. 25	6/05	Williamson.....	6	8. 43 Dry	30. 08 32. 85	51. 89 56. 67	9. 60 10. 48	1. 14 1. 24	----- -----	11959 13061	----- 14771
3629	<sup>45</sup> B. M. 25	6/05	Williamson.....	6	8. 72 Dry	30. 38 33. 28	53. 28 58. 37	7. 62 8. 35	1. 00 1. 10	----- -----	12200 13365	----- 14726
3632	<sup>46</sup> B. M. 25	6/05	Williamson.....	6	8. 88 Dry	29. 49 32. 37	53. 60 58. 82	8. 03 8. 81	. 99 1. 09	----- -----	----- -----	----- -----
3636	<sup>46</sup> B. M. 25	6/05	Williamson.....	6	8. 80 Dry	29. 85 32. 73	53. 83 59. 02	7. 52 8. 25	1. 13 1. 24	----- -----	12222 13401	----- 14754
3789	<sup>46</sup> B. M. 25	6/05	Williamson.....	6	7. 78 Dry	29. 85 32. 37	52. 39 56. 81	9. 98 10. 82	1. 32 1. 43	----- -----	11959 12969	----- 14734
1170	<sup>46</sup> B. M. 26	6/05	Williamson.....	6	7. 50 Dry	31. 68 34. 25	53. 67 58. 02	7. 15 7. 73	. 99 1. 07	----- -----	12386 13388	----- 14642

<sup>44</sup> Ibid., p. 92.<sup>45</sup> Lord, N. W., and others, Analyses of coals: U. S. Bureau of Mines Bull. 22, pt. 1, p. 92, 1913.<sup>46</sup> Ibid., p. 93.

TABLE 2.—Analyses of mine samples (not exactly indicative of commercial output)—Continued.

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sub>2</sub>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
1171	<sup>46</sup> B. M. 26	6/05	Williamson-----	6	7.34 Dry 37.01	34.29 50.84	50.84 54.86	7.53 8.13	2.04 2.20	-----	-----	-----
1318	<sup>46</sup> B. M. 26	6/05	Williamson-----	6	8.50 Dry 32.21	29.47 50.75	50.75 55.46	11.28 12.33	1.72 1.88	-----	11776 12870	----- 14916
19714	47	7/14	Williamson-----	7	7.28 Dry 34.54	32.03 50.00	50.00 53.93	10.69 11.53	1.91 2.06	-----	11804 12731	----- 14612
17719	<sup>48</sup> B. M. 27	8/13	Williamson-----	6	8.77 Dry 35.78	32.64 51.41	51.41 56.35	7.18 7.87	1.10 1.21	-----	12177 13347	----- 14626
17721	<sup>48</sup> B. M. 27	8/13	Williamson-----	6	8.70 Dry 34.81	31.78 51.89	51.89 56.83	7.63 8.36	1.00 1.10	-----	12173 13334	----- 14694
17720	<sup>48</sup> B. M. 27	8/13	Williamson-----	6	9.37 Dry 36.22	32.83 49.63	49.63 54.77	8.17 9.01	1.70 1.88	-----	11988 13228	----- 14717
28810	<sup>49</sup> B. M. 28	8/17	Williamson-----	6	8.31 Dry 35.34	32.40 50.75	50.75 55.35	8.54 9.31	1.33 1.45	-----	11965 13048	----- 14553
28811	<sup>49</sup> B. M. 28	8/17	Williamson-----	6	9.13 Dry 34.64	31.48 51.00	51.00 56.13	8.39 9.23	.97 1.07	-----	11822 13010	----- 14485
28812	<sup>49</sup> B. M. 28	8/17	Williamson-----	6	8.82 Dry 38.55	35.15 47.90	47.90 52.53	8.13 8.92	1.07 1.17	-----	11965 13122	----- 14559
28813	<sup>49</sup> B. M. 28	8/17	Williamson-----	6	9.31 Dry 36.31	32.93 49.63	49.63 54.73	8.13 8.96	.82 .90	-----	11902 13124	----- 14559
28814	<sup>49</sup> B. M. 28	8/17	Williamson-----	6	9.78 Dry 36.67	33.08 49.93	49.93 55.34	7.21 7.99	.75 .83	-----	11965 13262	----- 14381
No. 7 Coal.												
5416	99	8/12	LaSalle-----	7	13.82 Dry 48.06	41.42 48.06	41.42 41.67	8.86 10.27	3.95 4.58	.51 .59	11174 12966	----- 14744
5414	99	8/12	LaSalle-----	7	12.87 Dry 48.67	42.40 42.86	42.86 42.86	7.88 8.47	3.86 4.44	.00 .00	11468 13161	----- 14635
5417	96	8/12	LaSalle-----	7	13.99 Dry 45.12	38.81 46.65	46.65 46.65	7.08 8.23	3.23 3.76	.00 .00	11401 13255	----- 14675
4711	94	3/12	Vermilion-----	7	12.20 Dry 45.03	39.53 43.70	43.70 43.70	9.89 11.27	3.76 4.29	.46 .52	11243 12804	----- 14730
4713	94	3/12	Vermilion-----	7	12.70 Dry 44.90	39.20 44.95	44.95 44.95	8.86 10.15	2.70 3.19	.52 .59	11399 13057	----- 14776
4714	94	3/12	Vermilion-----	7	12.76 Dry 44.53	38.84 43.91	43.91 43.91	10.09 11.56	3.91 4.48	.61 .70	11106 12788	----- 14773
4716	94	3/12	Vermilion-----	7	12.67 Dry 44.67	39.01 42.86	42.86 42.86	10.89 12.47	3.54 4.06	.84 .96	11041 12644	----- 14734
4722	94	3/12	Vermilion-----	7	13.53 Dry 43.24	37.36 45.76	45.76 45.76	9.51 11.00	3.20 3.70	.46 .54	11045 12773	----- 14622
4724	94	3/12	Vermilion-----	7	13.27 Dry 42.95	37.25 46.87	46.87 46.87	8.83 10.18	3.27 3.77	.38 .44	11209 12925	----- 14650

<sup>47</sup> Fieldner, A. C., and others, Analyses of coals: U. S. Bureau of Mines Bull. 123, p. 36, 1918. Run of mine sample. Not included in averages.

<sup>48</sup> Ibid, p. 36.

<sup>49</sup> U. S. Bureau of Mines, unpublished analyses.



TABLE 2.—*Analyses of mine samples (not exactly indicative of commercial output)—Concluded.*

Laboratory number	Index number	Date	County	Coal bed	Proximate analysis of coal 1st: "As received," with total moisture 2nd: "Dry" or moisture free				Sulphur	CO <sup>2</sup>	B. t. u.	Unit coal
					Moisture	Volatile matter	Fixed carbon	Ash				
4727	97	3/12	Vermilion-----	7	12.92 Dry	36.98 42.46	38.94 44.73	11.16 12.81	2.90 3.33	.70 .80	10924 12514	----- 14715
4734	97	3/12	Vermilion-----	7	13.10 Dry	38.42 44.22	39.14 45.03	9.34 10.75	2.26 2.59	.56 .64	11281 12981	----- 14778
4736	97	3/12	Vermilion-----	7	13.41 Dry	37.33 43.11	38.87 44.89	10.39 12.00	2.54 2.93	.46 .53	11065 12778	----- 14787
84226	211	2/22	Vermilion-----	7	13.1 Dry	37.7 43.4	39.8 45.8	9.4 10.8	2.8 3.2	.59 .69	11110 12770	----- 14564
84227	211	2/22	Vermilion-----	7	14.1 Dry	37.0 43.1	39.3 45.7	9.6 11.2	2.9 3.4	.86 1.0	11030 12840	----- 14727
84228	211	2/22	Vermilion-----	7	13.7 Dry	37.0 42.9	39.5 45.7	9.8 11.4	3.2 3.7	.70 .81	11050 12800	----- 14724

TABLE 3.—*Average analyses and heat values for separate mines and by counties—grouped according to districts.*

## DISTRICT NO. 1—BUREAU CO., NO. 2 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
1	16.19 Dry	37.79 45.06	38.06 45.40	8.00 9.54	3.24 3.86	.82 .98	10787 12869	----- 14476
8	16.50 Dry	38.48 46.08	37.59 45.02	7.43 8.90	2.40 2.90	1.16 1.39	10868 13016	----- 14493
10	16.13 Dry	38.82 46.28	38.36 45.74	6.69 7.98	3.15 3.76	.70 .84	10994 13108	----- 14463
Average	16.27 Dry	38.35 45.80	38.00 45.39	7.38 8.81	2.93 3.50	.89 1.40	10883 12997	----- 14477

## DISTRICT NO. 1—GRUNDY CO., NO. 2 COAL

5	16.01 Dry	39.32 46.83	38.51 45.84	6.16 7.33	2.75 3.28	1.32 1.57	11104 13221	----- 14463
6	19.53 Dry	37.59 46.71	37.94 47.15	4.94 6.14	2.01 2.61	.70 .87	10818 13444	----- 14447
7	16.29 Dry	38.46 45.94	40.53 48.42	4.72 5.64	2.17 2.59	.48 .57	11394 13613	----- 14579
Average	17.28 Dry	38.48 46.49	39.02 47.14	5.27 6.37	2.33 2.82	.83 1.00	11113 13426	----- 14496

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts.—Continued.

## DISTRICT NO. 1—LA SALLE CO., NO. 2 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
2	14.60	39.88	36.97	8.55	3.97	.81	10904	-----
	Dry	46.70	43.29	10.01	4.65	.95	12768	14475
3	15.05	39.76	37.00	8.19	3.30	.59	10899	-----
	Dry	46.80	43.56	9.64	3.88	.69	12830	14448
9	17.45	38.98	34.52	9.04	3.18	1.49	10391	-----
	Dry	47.22	41.82	10.95	3.85	1.81	12587	14402
102	14.7	34.9	42.3	8.06	3.26	.73	11056	-----
	Dry	40.9	49.6	9.46	3.86	.84	12960	14892
103	12.4	39.40	41.27	6.65	2.61	-----	11779	-----
	Dry	44.99	47.10	7.90	2.97	-----	13448	14805
B. M.	13.93	36.78	40.34	8.93	3.45	-----	11162	-----
1	Dry	46.87	46.87	10.37	4.00	-----	12883	14767
Average	14.58	38.28	42.01	8.23	3.29	.60	11020	-----
	Dry	45.58	45.37	9.72	3.86	1.06	12912	14632

## DISTRICT NO. 1—MARSHALL CO., NO. 2 COAL

4	16.93	37.57	39.57	5.93	2.53	.37	11188	-----
	Dry	45.22	47.64	7.14	3.05	.44	13468	14696
11	13.28	40.58	37.71	8.43	3.04	.60	11435	-----
	Dry	46.80	43.48	9.72	3.51	.69	13186	14896
Average	15.10	39.06	38.68	7.16	2.79	.48	11315	-----
	Dry	46.01	45.56	8.43	3.28	.56	13327	14796

## EXTRA SAMPLE—LA SALLE CO., NO. 5 COAL

	14.76	41.33	34.26	9.65	3.38	.61	10692	-----
	Dry	48.49	40.19	11.32	3.97	.71	12543	14397

## DISTRICT NO. 1—LIVINGSTON CO., NO. 5 COAL

215	9.40	35.69	41.09	13.80	4.74	-----	11258	-----
	Dry	40.05	45.35	15.26	5.24	-----	12422	15084
216	13.76	36.00	38.96	11.50	3.15	-----	10850	-----
	Dry	41.48	45.18	13.34	3.66	-----	12581	14836
Average	11.58	35.84	40.02	12.65	3.94	-----	11054	-----
	Dry	40.26	45.26	14.30	4.45	-----	12501	14960

## DISTRICT No. 1—LA SALLE CO., NO. 7 COAL

99	13.56	40.87	37.80	7.77	3.68	.17	11347	-----
	Dry	47.28	43.73	8.99	4.26	.20	13127	14685

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 2—JACKSON CO., NO. 2 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
12	9.62	33.02	51.09	6.27	1.13	.69	12260	-----
	Dry	36.53	56.53	6.94	1.25	.76	13565	14705
13	10.18	33.40	51.90	4.52	.97	.29	12614	-----
	Dry	37.18	57.79	5.03	1.08	.32	14044	14888
14	8.56	34.18	50.25	7.01	1.54	.09	12418	-----
	Dry	37.39	54.95	7.66	1.68	.10	13581	14864
15	8.70	34.77	51.34	5.19	1.42	.09	12651	-----
	Dry	38.08	56.23	5.69	1.55	.12	13856	14815
16	9.34	34.55	50.52	5.59	1.40	.26	12490	-----
	Dry	38.11	55.72	6.17	1.54	.29	13777	14820
104	4.56	36.32	45.22	13.90	7.12	.03	11778	-----
	Dry	38.06	47.38	14.57	7.47	.03	12167	14927
Average	8.49	34.37	50.05	7.08	2.26	.24	12368	-----
	Dry	37.55	54.76	7.67	2.42	.27	13498	14836

## DISTRICT NO. 3—CHRISTIAN CO., NO. 1 COAL

21	11.31	38.89	40.94	8.86	2.35	.43	11602	-----
	Dry	43.85	46.16	9.99	2.65	.48	13081	14717

## DISTRICT NO. 3—FULTON CO., NO. 1 COAL

105	11.21	38.41	40.16	10.20	4.96	.62	11466	-----
	Dry	43.26	45.23	11.50	5.58	.70	12914	14950

## DISTRICT NO. 3—MERCER CO., NO. 1 COAL

17	17.63	39.13	34.13	9.11	5.02	.70	10336	-----
	Dry	47.51	41.44	11.05	6.09	.85	12548	14373
18	14.58	39.07	37.00	9.35	4.79	.21	10880	-----
	Dry	45.74	43.31	10.95	5.61	.25	12737	14640
19	14.52	39.26	36.32	9.90	4.24	.68	10809	-----
	Dry	45.93	42.49	11.58	4.96	.80	12645	14624
Average	15.58	39.17	35.80	9.45	4.69	.53	10673	-----
	Dry	46.40	42.41	11.19	5.55	.63	12643	14546

## DISTRICT NO. 3—McDONOUGH CO., NO. 2 COAL

22	17.40	33.30	41.47	7.82	2.02	.27	10811	-----
	Dry	40.31	50.23	9.48	2.45	.33	13091	14663
213	15.86	35.08	40.27	8.79	3.86	-----	10798	-----
	Dry	41.69	47.85	10.45	4.58	-----	12832	14621
Average	16.63	34.19	40.37	8.31	2.94	-----	10804	-----
	Dry	41.00	49.04	9.96	3.51	-----	12961	14642

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 3—SCHUYLER CO., NO. 2 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
214	14.53 Dry	37.83 43.26	42.08 48.11	7.54 8.62	4.54 5.19	----- -----	11731 13411	----- 14967

## DISTRICT NO. 4—MCLEAN CO., NO. 2 COAL

100	11.26 Dry	42.21 47.57	37.73 42.52	8.80 9.91	3.03 3.41	.98 1.10	11566 13034	----- 14714
B. M. 55	10.06 Dry	35.93 39.95	39.16 43.55	14.83 16.49	2.97 3.31	----- -----	11149 12422	----- 15028
Average	10.66 Dry	39.07 43.76	38.44 43.03	11.81 13.20	3.00 3.36	----- -----	11357 12728	----- 14871

## DISTRICT NO. 4—FULTON CO., NO. 5 COAL

28	16.68 Dry	36.68 44.02	36.76 44.12	9.88 11.86	2.90 3.48	1.36 1.63	10375 12452	----- 14403
29	16.38 Dry	35.96 43.01	36.88 44.10	10.78 12.89	3.47 4.15	1.02 1.22	10230 12234	----- 14349
30	16.18 Dry	35.17 41.96	37.77 45.06	10.88 12.98	3.06 3.65	1.53 1.82	10296 12284	----- 14402
31	16.88 Dry	36.32 43.70	36.32 43.70	10.48 12.61	2.98 3.58	1.25 1.50	10269 12355	----- 14424
32	14.66 Dry	37.24 43.64	37.71 44.18	10.39 12.18	3.28 3.84	1.54 1.81	10651 12481	----- 14502
110	15.43 Dry	33.62 39.76	39.47 46.67	11.48 13.57	2.50 2.66	1.41 1.67	10389 12285	----- 14473
111	14.61 Dry	34.05 39.88	38.64 46.25	13.22 14.86	3.03 3.55	2.22 2.60	10130 11865	----- 14289
112	15.26 Dry	35.88 41.30	38.61 45.56	11.12 13.12	2.79 3.29	1.54 1.78	10522 12818	----- 14596
113	14.25 Dry	34.79 40.57	39.19 45.71	11.75 13.71	3.18 3.71	1.45 1.69	10622 12383	----- 14656
114	14.81 Dry	35.86 37.10	38.43 45.11	10.88 12.78	2.89 3.40	1.60 1.87	10123 12265	----- 14339
115	15.25 Dry	33.50 39.50	40.50 47.80	10.25 12.70	3.10 3.70	1.16 1.37	10610 12520	----- 14580
116	15.69 Dry	35.03 41.55	38.29 45.43	10.97 13.01	3.88 4.61	.51 .61	10467 12416	----- 14609
117	13.5 Dry	34.4 39.8	38.8 44.8	13.3 15.4	3.5 4.1	----- -----	10410 12040	----- 14589
118	12.78 Dry	38.60 40.40	30.32 49.66	11.53 13.26	3.80 4.36	1.03 1.18	10903 12296	----- 14746
Average	15.88 Dry	35.50 41.15	37.68 45.58	11.40 13.53	3.16 3.72	1.35 1.58	10428 12335	----- 14496

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 4—LOGAN CO., NO. 5 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
33	14.20 Dry	37.19 43.35	37.44 43.40	11.37 13.25	3.34 3.89	1.42 1.66	10490 12226	----- 14400
109	13.53 Dry	35.58 41.14	40.82 47.20	10.06 11.64	2.95 3.09	1.05 1.15	10924 12633	----- 14590
B. M. 37	15.32 Dry	32.52 38.41	39.81 47.01	12.34 14.57	3.70 4.37	-----	10371 12234	----- 14671
Average	14.35 Dry	35.09 37.96	39.35 45.87	11.25 13.15	3.33 3.78	1.23 1.40	10595 12364	----- 14553

## DISTRICT NO. 4—MACON CO., NO. 5 COAL

41	14.48 Dry	36.00 42.10	38.05 44.49	11.47 13.41	3.32 3.88	.90 1.05	10445 12214	----- 14420
42	13.83 Dry	37.35 43.34	39.62 45.98	9.20 10.68	3.83 4.45	.09 .11	10877 12623	----- 14418
123	12.82 Dry	35.45 40.67	43.07 49.41	8.64 9.91	3.23 3.71	.13 .15	11010 12668	----- 14305
Average	13.71 Dry	36.26 42.03	40.24 46.62	9.77 11.33	3.46 4.01	.37 .43	10777 12501	----- 14381

## DISTRICT NO. 4—McLEAN CO., NO. 5 COAL

100	13.32 Dry	38.00 43.84	36.21 41.78	12.47 14.38	3.73 4.30	1.20 1.39	10580 12206	----- 14604
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## DISTRICT NO. 4—MENARD CO., NO. 5 COAL

34	17.33 Dry	35.88 43.40	38.62 46.72	8.17 9.88	3.44 4.16	.50 .60	10499 12700	----- 14478
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## DISTRICT NO. 4—PEORIA CO., NO. 5 COAL

25	14.92 Dry	36.92 43.30	37.21 43.74	11.02 12.95	3.44 4.04	1.21 1.42	10951 12448	----- 14614
26	15.00 Dry	36.48 42.91	36.75 43.24	11.77 13.85	3.08 3.62	1.80 2.12	10421 12260	----- 14614
106	13.40 Dry	30.33 35.03	44.80 51.76	11.46 13.20	3.80 4.40	1.05 1.20	10736 11980	----- 14670
107	10.73 Dry	34.56 40.16	39.96 46.60	11.36 13.23	2.96 3.40	1.77 2.05	10673 12423	----- 14617
B. M. 2	15.45 Dry	32.05 40.87	40.11 47.45	14.54 17.18	3.84 4.29	-----	10732 12693	----- 14687
B. M. 3	15.38 Dry	34.34 40.58	38.65 45.65	11.63 13.74	2.90 3.43	-----	10414 12415	----- 14575
Average	14.14 Dry	34.11 40.47	39.58 46.40	11.96 14.02	3.33 3.86	1.45 1.69	10654 12369	----- 14629



TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 4—SANGAMON CO., NO. 5 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
36	15.34 Dry	36.54 43.16	37.83 44.68	10.29 12.16	3.67 4.33	.59 .70	10519 12425	----- 14450
37	13.78 Dry	37.82 43.86	37.69 43.71	10.73 12.44	4.11 4.77	.47 .55	10625 12323	----- 14396
38	14.26 Dry	38.07 44.40	37.48 43.71	10.19 11.89	4.14 4.83	.37 .43	10649 12420	----- 14410
39	13.31 Dry	37.43 43.17	36.66 42.29	12.60 14.54	4.72 5.45	.94 1.09	10398 11995	----- 14420
40	15.06 Dry	36.69 43.19	38.15 44.92	10.10 11.89	4.08 4.80	.59 .69	10584 12460	----- 14403
119	14.06 Dry	35.85 41.71	39.54 46.01	10.54 12.26	3.74 4.31	.43 .50	10686 12434	----- 14479
120	13.62 Dry	36.81 42.62	39.24 45.42	10.32 11.95	3.93 4.55	.79 .92	10786 12487	----- 14452
121	10.73 Dry	34.55 40.30	40.77 47.83	10.28 11.96	3.75 4.37	.45 .52	10741 12491	----- 14502
122	13.15 Dry	35.62 41.02	41.28 47.54	9.93 11.44	3.90 4.49	.62 .72	10812 12449	----- 14434
B. M. 41	13.70 Dry	34.47 39.95	40.58 47.03	11.23 13.01	3.81 4.42	----- -----	10696 12332	----- 13969
Average	13.70 Dry	36.38 42.33	38.92 45.31	10.62 12.32	3.98 4.63	.51 .68	10650 12381	----- 14391

## DISTRICT NO. 4—TAZEWELL CO., NO. 5 COAL

27	14.38 Dry	37.74 44.08	38.23 44.65	9.66 11.28	3.10 3.62	1.20 1.40	10809 12624	----- 14496
108	15.76 Dry	34.36 40.80	40.60 48.23	9.26 10.76	3.30 3.90	.75 .89	10660 12656	----- 14764
Average	15.07 Dry	36.05 42.44	39.41 46.44	9.46 11.02	3.20 3.76	.97 1.14	10734 12640	----- 14630

## DISTRICT NO. 5—GALLATIN CO., NO. 5 COAL

47	5.72 Dry	35.77 37.94	46.71 49.54	11.80 12.52	3.47 3.68	1.01 1.07	12053 12784	----- 14919
Extra	4.13 Dry	34.21 35.68	52.80 55.07	8.86 9.25	3.23 3.37	.02 .03	12987 13546	----- 15175
135	3.96 Dry	35.38 36.84	50.23 52.31	10.41 10.85	3.37 3.51	.25 .26	12601 12997	----- 14997
Average	4.60 Dry	35.12 36.82	49.91 52.31	10.36 10.87	3.36 3.52	.43 .45	12547 13309	----- 15030

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 5—SALINE CO., NO. 5 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
43	6.97	35.98	49.69	7.36	2.05	.32	12550	-----
	Dry	38.68	53.41	7.92	2.20	.34	13490	14829
44	6.70	35.31	49.55	8.44	2.56	.02	12401	-----
	Dry	37.85	53.11	9.04	2.74	.02	13291	14824
45	7.03	34.78	50.27	7.92	2.48	.26	12420	-----
	Dry	37.41	54.07	8.52	2.67	.28	13359	14806
46	7.96	34.68	48.54	8.82	2.79	.46	12077	-----
	Dry	37.68	52.74	9.58	3.03	.50	13122	14741
48	7.67	33.90	50.26	8.17	2.56	.70	12234	-----
	Dry	36.72	54.43	8.85	2.77	.76	13250	14739
49	5.20	38.06	45.90	10.84	4.60	.59	12193	-----
	Dry	40.15	48.42	11.43	4.85	.62	12862	14824
124	6.83	33.25	51.85	8.03	2.24	.22	12435	-----
	Dry	35.70	55.67	8.62	2.40	.23	13353	14806
125	6.59	33.50	52.08	7.82	2.37	.09	12526	-----
	Dry	35.87	55.75	8.37	2.54	.09	13743	14831
126	6.01	34.05	52.34	7.58	2.56	.16	12582	-----
	Dry	36.23	55.70	8.06	2.61	.16	13341	14784
127	5.68	33.78	52.85	7.94	2.13	.42	12614	-----
	Dry	35.82	55.75	8.42	2.26	.44	13708	14780
128	6.51	32.24	51.31	9.93	1.87	.06	12175	-----
	Dry	34.48	54.87	10.63	2.01	.06	13022	14782
129	5.98	34.17	52.82	7.02	2.01	.09	12715	-----
	Dry	36.34	56.21	7.47	2.17	.09	13524	14840
130	6.22	33.33	51.47	8.96	2.71	.16	12339	-----
	Dry	35.54	54.89	9.56	2.83	.17	13358	14772
B. M. 5	7.61	32.64	51.65	8.24	2.08	-----	12225	-----
	Dry	35.05	55.99	8.95	2.22	-----	13316	15208
B. M. 6	5.78	33.39	52.81	8.01	2.26	-----	12718	-----
	Dry	35.44	56.06	8.50	2.72	-----	13498	15120
B. M. 7	7.07	34.56	51.07	7.29	2.15	-----	12560	-----
	Dry	37.19	54.95	7.85	2.31	-----	13516	15120
B. M. 8	4.83	38.49	46.74	9.73	4.03	-----	12441	-----
	Dry	40.65	49.12	10.22	4.23	-----	13073	14842
Average	6.08	34.37	51.05	8.47	2.83	.22	12521	-----
	Dry	36.61	54.36	9.02	2.96	.24	13377	14922

## DISTRICT NO. 5—GALLATIN CO., NO. 6 COAL

Extra	7.54	34.96	45.68	11.82	4.34	.23	11916	-----
	Dry	37.81	49.41	12.78	4.70	.25	12888	15136
223	7.04	34.97	48.15	8.83	4.37	.03	12334	-----
	Dry	38.38	51.82	9.79	4.72	.03	13677	15095
Average	7.29	34.96	46.91	10.33	4.36	.13	12155	-----
	Dry	38.09	50.61	11.29	4.71	.14	13283	15115

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## EXTRA SAMPLE—GALLATIN CO., COAL MARKED "BELL"

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
	3.40	33.33	55.18	8.09	4.25	.03	13401	-----
	Dry	34.50	57.12	8.38	4.40	.03	13872	15420

## DISTRICT NO. 5—WHITE CO., NO. 6 COAL

228	8.36	35.24	47.43	8.89	2.85	.64	11923	-----
	Dry	38.49	51.80	9.71	3.11	.69	13022	14654

## DISTRICT NO. 6—FRANKLIN CO., NO. 6 COAL

50	9.34	34.84	48.03	7.79	1.04	.38	12004	-----
	Dry	38.42	52.99	8.59	1.15	.42	13241	14633
51	10.28	33.42	49.05	7.25	1.18	.10	11890	-----
	Dry	37.26	54.66	8.08	1.32	.11	13252	14562
52	6.77	38.35	44.62	10.26	3.13	.91	11875	-----
	Dry	41.14	47.85	11.00	3.36	.98	12737	14554
53	10.18	32.78	48.88	8.16	.64	.61	11661	-----
	Dry	36.50	54.41	9.09	.71	.68	12983	14419
56	8.10	36.30	45.34	10.26	2.51	.74	11826	-----
	Dry	39.50	49.34	11.16	2.73	.80	12758	14601
57	9.67	35.69	49.55	8.54	.95	.32	11756	-----
	Dry	32.24	54.86	9.45	1.05	.35	13015	14529
58	8.93	34.51	48.80	7.76	.74	.36	11937	-----
	Dry	37.89	53.59	8.52	.81	.40	13108	14463
134	8.28	33.23	47.34	8.80	1.26	.20	11962	-----
	Dry	36.22	54.17	9.59	1.38	.22	12885	14487
136	7.37	35.16	47.39	9.66	2.50	.37	11757	-----
	Dry	37.98	51.57	10.43	2.72	.40	12602	14433
137	10.21	34.29	47.70	7.79	.79	-----	11813	-----
	Dry	35.67	53.13	8.65	.88	-----	13155	14556
138	9.84	34.30	47.93	7.91	.76	-----	11824	-----
	Dry	39.09	53.16	8.78	.84	-----	13113	14392
139	7.87	35.15	47.60	9.36	2.28	.22	11790	-----
	Dry	38.14	51.70	10.14	2.47	.24	14351	14461
140	6.84	35.05	49.22	8.87	2.54	.18	11964	-----
	Dry	37.61	52.86	9.52	2.71	.19	12708	14412
141	10.19	33.35	48.66	7.79	1.11	-----	11824	-----
	Dry	37.14	54.18	8.68	1.50	-----	13166	14632
142	9.98	32.72	49.20	8.09	.83	-----	11903	-----
	Dry	36.34	54.66	8.98	.92	-----	13224	14675
143	10.18	34.19	48.54	7.12	1.30	-----	11936	-----
	Dry	36.74	54.04	7.92	1.44	-----	12827	14700
144	10.46	32.35	49.66	7.51	.73	-----	11807	-----
	Dry	36.13	55.47	8.38	.82	-----	13216	14550
145	8.48	32.16	50.88	8.46	1.03	.16	11917	-----
	Dry	35.16	55.45	9.24	1.13	.17	12969	14503

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 6—FRANKLIN CO., NO. 6 COAL—Concluded.

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit ccal"
146	9.28 Dry	31.39 38.84	50.06 55.18	9.27 10.21	.69 .76	-----	11908 12962	----- 14558
147	8.42 Dry	33.91 37.43	46.45 51.29	10.20 11.25	3.27 3.61	-----	11569 12773	----- 14649
B. M. 9	9.35 Dry	32.41 35.76	49.39 52.92	8.84 9.75	1.41 1.55	-----	11858 13016	----- 14686
B. M. 10	8.61 Dry	33.69 36.87	48.47 53.04	9.21 10.07	1.09 1.19	-----	11921 13020	----- 14688
B. M. 11	9.50 Dry	31.98 35.34	47.08 52.02	11.44 12.64	1.45 1.60	-----	11506 12713	----- 14780
B. M. 12	10.63 Dry	28.83 32.26	52.03 58.24	8.48 9.49	5.53 6.20	-----	11585 12734	----- 14909
B. M. 13	9.00 Dry	34.27 37.66	48.08 52.83	8.64 9.50	1.06 1.17	-----	11980 13165	----- 14712
B. M. 14	9.18 Dry	33.93 37.36	48.51 53.42	8.36 9.37	.92 1.01	-----	11911 13116	----- 14620
B. M. 15	9.96 Dry	32.86 36.49	49.06 54.49	8.11 9.01	.80 .89	-----	11901 13215	----- 14672
B. M. 16	7.14 Dry	30.69 33.93	50.47 55.80	9.27 10.26	.51 .57	-----	11727 12964	----- 14602
B. M. 17	8.99 Dry	32.21 35.39	49.75 54.40	9.29 11.94	.88 .97	-----	11788 12953	----- 14673
B. M. 18	9.83 Dry	32.76 36.34	49.52 54.93	7.87 8.73	1.00 1.11	-----	11901 13199	----- 14609
B. M. 19	10.21 Dry	32.45 36.13	49.33 54.94	8.01 8.92	1.02 1.18	-----	11152 13162	----- 14605
B. M. 20	8.25 Dry	31.30 34.11	49.65 54.12	10.79 11.76	1.08 1.18	-----	11645 12128	----- 14580
B. M. 21	9.84 Dry	34.58 38.04	47.93 53.16	7.91 8.78	.76 .84	-----	11824 13113	----- 14514
B. M. 22	9.58 Dry	33.58 37.14	48.20 53.31	8.63 9.54	1.09 1.21	-----	11866 13125	----- 14640
B. M. 58	8.33 Dry	34.91 38.07	48.45 52.87	8.29 9.05	1.09 1.18	-----	12050 13146	----- 14618
Average	9.11 Dry	33.53 36.75	48.59 53.57	8.68 9.61	1.39 1.54	.37 .41	11815 13023	----- 14590

## DISTRICT NO. 6—JACKSON CO., NO. 6 COAL

55	8.96 Dry	34.44 37.83	46.40 50.97	10.20 11.20	2.65 2.91	.40 .44	11609 12751	----- 14608
183	9.74 Dry	34.58 38.32	46.62 51.58	9.34 10.28	1.43 1.58	.14 .15	11467 12693	----- 14343
Average	9.35 Dry	34.51 38.07	46.51 51.27	9.77 10.74	2.04 2.24	.27 .29	11538 12722	----- 14475

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 6—PERRY CO., NO. 6 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit cal"
54	9.92 Dry	32.72 36.81	46.97 52.15	10.39 11.53	.92 1.02	.25 .28	11335 12583	----- 14407
175	10.14 Dry	35.64 39.67	43.76 48.70	10.45 11.63	3.66 4.08	.36 .40	11356 12455	----- 14379
178	9.77 Dry	34.99 38.78	42.19 47.13	12.70 14.06	4.09 4.54	.32 .34	10815 11987	----- 14330
179	8.83 Dry	37.36 40.99	43.02 47.18	10.78 11.82	3.40 3.73	.12 .13	11295 12202	----- 14327
180	9.31 Dry	33.64 37.10	47.51 52.39	9.52 10.50	1.07 1.18	.20 .23	11596 12278	----- 14337
181	12.08 Dry	33.81 38.46	44.87 51.04	9.22 10.49	.99 1.69	----- -----	11227 12769	----- 14446
B. M. 29	10.96 Dry	32.52 36.53	48.64 54.63	7.86 8.83	.85 .96	----- -----	11542 12963	----- 14365
Average	10.14 Dry	34.38 38.33	45.28 50.46	10.13 11.26	2.14 2.45	.25 .27	11309 12462	----- 14370

## DISTRICT NO. 6—WILLIAMSON CO., NO. 6 COAL

59	10.47 Dry	32.99 36.85	47.27 52.80	9.27 10.35	1.52 1.70	.38 .43	11630 12990	----- 14684
60	8.22 Dry	34.00 37.04	48.79 53.16	8.99 9.80	2.16 2.35	.33 .36	11959 13030	----- 14660
61	9.27 Dry	33.83 37.28	49.70 54.78	7.20 7.94	1.37 1.51	.13 .14	12127 13366	----- 14671
62	9.13 Dry	33.09 36.42	49.94 54.95	7.84 8.63	1.17 1.29	.22 .24	12028 13236	----- 14637
63	9.47 Dry	33.45 36.96	48.13 53.16	8.95 9.88	1.94 2.14	.36 .40	11852 13092	----- 14730
64	9.34 Dry	32.77 36.15	49.48 54.58	8.41 9.27	.92 1.01	.52 .57	11872 13095	----- 14577
65	9.31 Dry	33.52 36.96	48.98 54.01	8.19 9.03	1.70 1.88	.13 .14	11919 13143	----- 14627
148	7.69 Dry	33.48 36.39	50.15 54.51	8.37 9.09	1.21 1.32	.15 .16	12129 13183	----- 14664
149	6.31 Dry	35.09 37.45	47.86 51.11	10.73 11.43	3.08 3.28	.43 .49	11931 12738	----- 14697
150	5.98 Dry	35.00 37.23	47.69 50.72	11.29 12.01	4.00 4.25	.26 .27	11786 12536	----- 14550
151	6.91 Dry	36.41 39.11	47.09 50.58	9.59 10.30	2.78 2.99	.10 .11	12015 12507	----- 14625
152	7.03 Dry	32.26 34.70	51.63 55.53	9.07 9.75	1.32 1.42	.31 .33	12117 13009	----- 14617
153	9.63 Dry	32.30 37.49	49.54 54.83	8.52 9.43	.91 1.01	----- -----	11824 13086	----- 14607
154	7.90 Dry	32.28 35.05	51.29 55.70	8.52 9.24	1.19 1.29	.17 .19	12108 13129	----- 14530
155	8.21 Dry	32.75 35.67	51.09 55.66	7.94 8.66	1.18 1.29	.14 .16	12017 13043	----- 14485
156	8.24 Dry	32.91 34.56	52.98 57.74	7.05 7.28	1.40 1.54	.12 .13	12150 13202	----- 14448



TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 6—WILLIAMSON CO., NO. 6 COAL—Concluded.

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
157	8.20	34.51	48.33	8.95	2.50	.24	12007	-----
	Dry	37.59	52.67	9.74	2.71	.25	13081	14718
158	8.54	31.07	51.88	8.50	2.22	.17	11861	-----
	Dry	33.97	56.73	9.29	2.42	.18	12892	14535
159	7.59	33.59	50.40	9.74	3.11	.13	11880	-----
	Dry	34.90	54.54	10.54	3.36	.14	12720	14625
160	8.07	32.59	50.70	8.64	2.14	.05	11966	-----
	Dry	35.44	55.16	9.39	2.32	.05	12900	14564
161	9.07	33.00	49.84	8.08	.98	-----	11923	-----
	Dry	36.30	54.81	8.88	1.08	-----	13115	14539
162	9.90	33.23	48.10	8.77	1.27	-----	11716	-----
	Dry	36.88	53.38	9.74	1.41	-----	13003	14579
163	6.62	34.97	47.61	10.75	3.16	-----	11875	-----
	Dry	37.92	51.17	11.52	3.28	-----	12702	14624
164	7.31	34.18	46.48	12.02	3.07	-----	11635	-----
	Dry	36.88	50.15	12.97	3.31	-----	12553	14726
165	8.04	33.04	49.10	9.81	2.24	.70	11854	-----
	Dry	35.92	53.42	10.65	2.42	.76	12893	14655
166	7.46	32.79	49.32	10.41	2.86	.55	11733	-----
	Dry	35.44	53.31	11.24	3.05	.60	12529	14540
167	7.78	32.75	50.34	9.11	1.88	.27	11925	-----
	Dry	35.50	54.60	9.88	2.03	.29	12858	14550
168	5.22	36.59	46.09	12.08	3.55	.36	11909	-----
	Dry	38.60	48.63	12.75	3.76	.38	12450	14707
169	6.10	35.44	47.27	11.18	3.85	.36	11786	-----
	Dry	37.74	50.35	11.91	4.11	.38	12414	14553
170	6.40	36.71	47.70	9.19	3.41	.04	12150	-----
	Dry	39.22	50.96	9.82	3.64	.04	12981	14644
171	7.29	34.93	47.65	10.13	3.78	.04	11745	-----
	Dry	37.68	51.39	10.93	4.08	.04	12669	14334
172	6.40	36.38	48.20	9.02	3.45	.04	12179	-----
	Dry	38.87	51.49	9.64	3.69	.04	13012	14648
173	6.95	36.05	45.33	11.65	3.54	.52	11744	-----
	Dry	38.75	48.73	12.51	3.81	.56	12623	14787
174	6.93	33.52	50.04	9.49	2.03	-----	12039	-----
	Dry	36.02	53.77	10.20	2.18	-----	12934	14610
B. M. 23	11.44	30.82	46.70	11.02	2.82	-----	11191	-----
	Dry	34.77	52.79	12.43	3.17	-----	12708	12275
B. M. 24	9.89	31.30	50.62	9.52	1.79	-----	11983	-----
	Dry	34.22	55.38	10.40	2.23	-----	13085	14815
B. M. 25	8.65	30.20	52.99	8.17	1.23	-----	12079	-----
	Dry	33.06	58.01	8.92	1.34	-----	13220	14725
B. M. 26	7.78	31.81	51.75	8.65	1.58	-----	12081	-----
	Dry	34.49	53.20	9.39	1.71	-----	13129	14779
B. M. 27	8.94	32.41	50.97	7.66	1.26	-----	12112	-----
	Dry	35.56	55.98	8.41	1.39	-----	13303	14679
B. M. 28	9.07	33.00	49.84	8.18	.98	-----	11923	-----
	Dry	36.30	54.81	8.88	1.08	-----	13073	14507
Average	8.07	33.52	50.12	9.26	2.17	.25	11549	-----
	Dry	36.43	53.48	10.05	2.34	.27	12940	14463

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 7—BOND CO., NO. 6 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
218	11.96 Dry	35.09 39.86	42.31 48.06	10.30 12.07	3.38 3.84	.66 .70	10806 12274	----- 14240

## DISTRICT NO. 7—CHRISTIAN CO., NO. 1 COAL

21	11.31 Dry	38.89 43.85	40.94 46.16	8.86 9.99	2.35 2.65	.43 .48	11602 13081	----- 14717
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## DISTRICT NO. 7—CHRISTIAN CO., NO. 2 COAL

21	12.96 Dry	38.96 45.01	40.94 47.04	6.92 7.55	3.13 3.60	.20 .24	11591 13319	----- 14691
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## DISTRICT NO. 7—CHRISTIAN CO., NO. 6 COAL

219	12.00 Dry	37.22 42.29	39.77 45.19	11.01 12.51	3.85 4.38	.45 .51	10798 12271	----- 14455
220	13.91 Dry	36.39 42.28	39.32 45.68	10.36 12.02	4.00 4.65	.54 .63	10682 12410	----- 14493
221	12.04 Dry	37.09 42.17	40.60 46.16	10.25 11.66	4.17 4.74	.22 .26	10887 12438	----- 14293
222	12.10 Dry	37.64 42.83	41.00 46.73	9.17 10.43	3.71 4.22	.11 .13	11043 12565	----- 13917
B. M. 56	12.67 Dry	37.27 42.75	39.44 45.17	10.55 12.08	3.65 4.38	----- -----	10919 12504	----- 14442
Average	12.54 Dry	37.12 42.46	40.03 45.79	10.27 11.74	3.89 4.47	.33 .38	10866 12438	----- 14320

## DISTRICT NO. 7—CLINTON CO., NO. 6 COAL

84	12.86 Dry	37.26 42.76	39.53 45.36	10.35 11.88	4.26 4.89	.58 .66	10755 12342	----- 14335
85	12.39 Dry	36.88 42.10	40.68 46.43	10.05 11.47	3.52 4.02	.72 .82	10836 12368	----- 14245
198	11.09 Dry	36.69 41.61	41.04 46.17	10.86 12.21	3.51 3.95	.61 .69	10887 12242	----- 14450
199	11.17 Dry	34.93 39.32	43.26 48.69	10.64 11.98	3.58 4.03	.44 .50	10920 12294	----- 13853
B. M. 46	11.71 Dry	35.21 39.88	42.63 48.29	10.44 11.82	4.06 4.59	----- -----	11011 12441	----- 14363
B. M. 47	12.53 Dry	33.43 38.15	44.20 50.55	9.83 11.23	3.96 4.52	----- -----	10947 12503	----- 14801
B. M. 48	14.75 Dry	29.62 34.75	45.98 53.94	9.64 11.31	1.57 1.84	----- -----	10726 12629	----- 14447
Average	12.35 Dry	34.90 39.79	42.47 48.49	10.25 13.12	3.49 3.97	.58 .66	10871 12402	----- 14356

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 7—MACOUPIN CO., NO. 6 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
66	14.26 Dry	38.70 45.14	37.07 43.24	9.97 11.62	4.34 5.06	.41 .48	10549 12304	----- 14236
67	14.19 Dry	37.48 43.68	38.24 44.57	9.99 11.75	3.92 4.57	.33 .39	10558 12447	----- 14408
68	12.87 Dry	39.24 45.04	38.73 44.45	9.16 10.51	4.56 5.23	.30 .35	10964 12583	----- 14365
69	14.20 Dry	37.40 43.59	36.95 43.06	11.45 13.35	4.42 5.15	.29 .34	10438 12165	----- 14388
185	11.85 Dry	39.35 44.62	39.77 45.14	9.01 10.23	3.49 3.96	.28 .32	11069 12557	----- 14243
186	10.78 Dry	37.82 42.54	40.56 45.64	10.49 11.81	4.00 4.50	.66 .74	10906 12271	----- 14208
187	13.56 Dry	36.74 42.51	38.83 44.92	10.80 12.57	4.19 4.85	.40 .47	10549 12203	----- 14279
188	11.97 Dry	38.65 43.91	40.90 46.50	8.42 9.57	3.93 4.46	.14 .16	11061 12566	----- 14189
189	13.93 Dry	35.12 40.80	42.04 48.85	8.89 10.34	3.78 4.39	.11 .13	11012 12407	----- 14129
190	14.11 Dry	34.23 39.86	42.42 49.39	9.23 10.74	3.63 4.22	.15 .18	10709 12466	----- 14191
228	14.03 Dry	37.17 43.24	39.60 46.06	9.20 10.70	3.49 4.06	----- -----	10753 12508	----- 14273
B. M. 30	14.29 Dry	34.18 39.86	40.16 46.86	11.36 13.27	3.91 4.57	----- -----	10536 12260	----- 14558
B. M. 31	14.25 Dry	36.85 42.48	39.20 45.20	10.68 12.31	4.21 4.85	----- -----	10632 12258	----- 14298
Average	13.36 Dry	37.32 42.86	39.58 45.42	9.92 11.46	4.01 4.63	.30 .35	10752 12380	----- 14290

## DISTRICT NO. 7—MADISON CO., NO. 6 COAL

70	12.81 Dry	38.67 44.35	37.40 42.91	11.12 12.75	4.80 5.51	.44 .54	10661 12227	----- 14365
71	12.52 Dry	39.55 45.21	37.51 42.88	10.42 11.91	4.09 4.68	.61 .70	10871 12427	----- 14421
72	13.82 Dry	37.54 43.56	38.94 45.19	9.70 11.25	4.25 4.93	.25 .29	10722 12441	----- 14391
73	14.71 Dry	38.61 45.27	38.22 44.81	8.46 9.92	3.76 4.41	.28 .33	10785 12645	----- 14305
191	12.97 Dry	38.33 44.05	37.82 43.46	10.86 12.47	3.69 4.24	.51 .59	10708 12305	----- 14362
192	11.64 Dry	37.02 41.89	41.06 46.47	10.27 11.62	4.04 4.57	.44 .50	10963 12407	----- 14511
B. M. 32	12.69 Dry	35.12 40.19	36.14 43.68	14.04 15.80	4.32 4.94	----- -----	10232 11750	----- 14619
B. M. 33	10.69 Dry	33.08 37.04	36.14 40.47	20.09 22.49	4.06 4.55	----- -----	9713 10876	----- 14560
B. M. 34	13.25 Dry	34.03 39.44	40.09 46.47	12.11 14.08	3.98 4.61	----- -----	10371 12057	----- 14448

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 7—MADISON CO., NO. 6 COAL—Concluded.

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
B. M. 35	12.95 Dry	34.11 39.19	41.11 47.23	11.81 13.57	4.06 4.66	----- -----	10699 12292	----- 14505
B. M. 36	13.07 Dry	34.27 39.42	40.79 46.93	11.86 13.64	4.45 5.11	----- -----	10562 12115	----- 14532
B. M. 38	15.09 Dry	31.00 36.51	46.49 54.75	7.42 8.74	.83 .98	----- -----	11151 13133	----- 14533
B. M. 39	15.19 Dry	31.02 36.57	43.41 51.19	10.36 12.23	1.44 1.70	----- -----	10737 12567	----- 14526
B. M. 40	12.69 Dry	36.50 41.80	41.45 47.76	9.35 10.71	3.72 4.05	----- -----	11025 12627	----- 14466
Average	13.14 Dry	35.63 41.03	44.31 46.01	12.50 12.94	3.67 4.21	.42 .49	10657 12276	----- 14471

## DISTRICT NO. 7—MARION CO., NO. 6 COAL

87	10.46 Dry	36.85 41.15	41.53 46.38	11.16 12.47	4.01 4.48	.42 .47	11174 12480	----- 14574
206	9.93 Dry	36.45 40.47	42.22 46.89	11.38 12.63	4.06 4.50	.31 .34	11168 12401	----- 14582
207	10.41 Dry	36.71 40.98	42.31 47.22	10.56 11.79	3.27 3.65	.43 .49	11267 12576	----- 14536
B. M. 52	10.69 Dry	36.01 40.32	41.76 46.78	11.53 12.89	3.60 4.03	----- -----	11018 12257	----- 14650
Average	10.37 Dry	36.50 40.75	41.95 46.81	11.15 12.44	3.96 4.16	.29 .32	11156 12428	----- 14585

## DISTRICT NO. 7—MONTGOMERY CO., NO. 6 COAL

76	13.89 Dry	37.05 43.04	38.44 44.64	10.62 12.32	3.85 4.47	.94 1.10	10574 12280	----- 14312
77	14.40 Dry	36.70 42.88	39.84 46.54	9.06 10.58	3.83 4.47	.49 .57	10709 12511	----- 14268
194	13.19 Dry	36.30 41.81	40.62 47.03	9.68 11.15	4.07 4.69	.49 .57	10779 12418	----- 14270
195	12.87 Dry	36.07 41.39	41.61 47.77	9.44 10.83	3.83 4.40	.45 .51	10844 12447	----- 14348
196	12.27 Dry	36.79 41.87	40.62 46.23	10.45 11.89	4.42 5.04	.73 .83	10799 12296	----- 14271
197	14.71 Dry	34.67 40.66	41.79 49.01	8.79 10.32	3.85 4.51	.42 .49	10588 12415	----- 14113
B. M. 43	13.54 Dry	38.85 44.47	42.09 48.69	11.64 13.45	3.99 4.61	----- -----	10550 12195	----- 14453
B. M. 44	13.17 Dry	33.64 38.75	41.34 47.62	11.83 13.62	----- -----	----- -----	10548 12168	----- 14394
B. M. 45	13.47 Dry	34.62 40.01	40.32 46.60	11.57 13.37	3.47 4.64	----- -----	10558 12202	----- 14417
Average	13.50 Dry	34.96 41.65	40.74 47.12	10.34 11.94	3.91 4.60	.58 .67	10661 12325	----- 14316

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 7—MOULTRIE CO., NO. 6 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
225	6.83 Dry	39.15 42.01	42.31 45.41	11.37 12.56	4.01 4.31	.57 .61	11878 12738	----- 14882

## DISTRICT NO. 7—PERRY CO., NO. 6 COAL

88	9.61 Dry	37.09 41.03	41.27 45.66	12.03 13.30	3.70 4.10	.86 .95	10982 12150	----- 14331
89	12.45 Dry	36.14 41.28	42.77 48.85	8.64 9.87	2.80 3.20	.27 .31	11207 12801	----- 14431
90	10.95 Dry	37.00 41.55	41.82 46.96	10.23 11.50	3.61 4.05	.56 .63	11060 12420	----- 14314
176	10.17 Dry	36.37 40.48	43.32 48.23	10.13 11.28	3.43 3.61	.48 .52	11180 12446	----- 14254
177	9.45 Dry	35.01 38.66	41.93 46.31	13.61 15.03	3.84 4.24	.86 .95	10763 11886	----- 14334
182	9.09 Dry	36.52 39.38	43.91 48.30	11.19 12.31	3.71 4.08	.41 .45	11139 12252	----- 14263
184	7.99 Dry	38.16 41.48	42.59 46.29	11.24 12.22	3.57 3.88	.52 .56	11290 12271	----- 14263
Average	9.95 Dry	36.61 40.55	42.51 47.22	11.01 12.21	3.52 3.88	.56 .62	11088 12318	----- 14312

## DISTRICT NO. 7—RANDOLPH CO., NO. 6 COAL

83	11.13 Dry	37.28 41.95	40.14 45.17	11.45 12.89	4.24 4.77	.58 .65	10855 12214	----- 14351
229	8.39 Dry	37.50 40.94	43.61 47.60	10.49 11.45	3.94 4.30	.17 .19	11275 12308	----- 14180
208	10.17 Dry	36.48 40.61	41.30 45.98	12.03 13.40	3.78 4.24	.61 .67	10940 12184	----- 14388
209	9.64 Dry	36.90 40.84	41.90 46.37	11.54 12.77	4.25 4.70	.64 .71	10960 12131	----- 14227
210	9.33 Dry	36.21 39.93	42.96 47.38	11.50 12.69	3.51 3.87	.32 .35	11189 12341	----- 14434
Average	9.73 Dry	36.87 40.85	41.99 46.50	11.40 12.64	3.94 4.37	.46 .51	11043 12235	----- 14316

## DISTRICT NO. 7—SANGAMON CO., NO. 6 COAL

74	14.25 Dry	38.42 44.80	37.22 43.42	10.11 11.79	4.75 5.54	.39 .46	10556 12310	----- 14287
75	14.15 Dry	37.58 43.77	38.99 45.42	9.28 10.81	3.76 4.38	.45 .52	10786 12564	----- 14369
193	13.12 Dry	36.48 41.97	40.21 46.28	10.18 11.72	4.01 4.61	.56 .65	10751 12375	----- 14320
B. M. 42	14.82 Dry	34.81 40.85	39.76 46.67	10.60 12.47	4.27 5.01	----- -----	10473 12337	----- 14516
Average	14.08 Dry	36.82 42.84	39.04 45.44	10.04 11.69	4.19 4.88	.46 .54	10641 12396	----- 14373



TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts—Continued.

## DISTRICT NO. 7—SHELBY CO., NO. 5 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
217	10.74	36.59	41.48	10.84	3.70	.52	11050	-----
	Dry	41.15	46.64	12.20	4.16	.59	12426	14568

## DISTRICT NO. 7—ST. CLAIR CO., NO. 6 COAL

78	11.75	28.71	38.12	11.43	3.63	.80	10874	-----
	Dry	43.86	43.19	12.95	4.11	.91	12322	14466
79	11.31	39.77	38.92	10.00	3.94	.63	11143	-----
	Dry	44.84	43.89	11.27	4.44	.71	12564	14468
80	10.04	39.33	39.09	11.54	3.91	.78	11045	-----
	Dry	43.72	43.45	12.83	4.35	.87	12278	14398
81	11.23	40.36	38.31	10.10	4.03	.54	11126	-----
	Dry	45.47	43.17	11.39	4.54	.61	12533	14444
82	11.94	39.72	37.53	10.81	4.46	.39	10949	-----
	Dry	45.10	42.62	12.27	5.07	.45	12434	14510
200	13.74	31.44	43.54	11.24	1.79	.69	10574	-----
	Dry	36.47	50.49	13.04	2.08	.79	12262	14341
201	11.66	37.78	40.80	10.09	3.69	.39	11087	-----
	Dry	42.38	46.19	11.42	4.18	.44	12550	14537
202	11.09	37.37	39.59	11.93	4.62	.50	10864	-----
	Dry	42.04	44.53	13.42	5.19	.56	12220	14473
203	12.26	39.93	39.32	10.39	4.32	.49	11167	-----
	Dry	44.63	43.86	11.60	4.97	.55	12456	14401
204	11.52	37.20	41.67	9.61	2.82	.10	11155	-----
	Dry	42.05	47.09	10.86	3.19	.10	12607	14394
205	9.67	37.28	41.22	11.82	3.30	.55	11044	-----
	Dry	41.27	45.64	13.08	3.66	.61	12227	14357
B. M. 49	13.55	34.52	42.06	10.76	3.33	-----	10625	-----
	Dry	38.90	48.66	12.44	3.86	-----	12320	14419
B. M. 50	10.75	39.66	37.99	14.00	4.09	-----	10132	-----
	Dry	41.71	42.55	15.74	4.58	-----	11750	14607
B. M. 51	10.78	39.18	38.96	11.08	4.11	-----	11069	-----
	Dry	43.89	43.67	12.43	4.61	-----	12405	14678
Average	11.52	38.01	39.79	11.05	3.71	.53	10918	-----
	Dry	42.59	44.92	12.48	4.20	.60	12352	14463

## DISTRICT NO. 7—WASHINGTON CO., NO. 6 COAL

86	11.13	38.20	39.39	11.28	3.91	.50	10964	-----
	Dry	42.98	44.32	12.70	4.40	.56	12337	14448
226	9.42	38.65	39.71	12.21	4.30	.52	10958	-----
	Dry	42.68	43.84	13.47	4.75	.57	12098	14318
Average	10.27	38.42	39.55	11.74	4.10	.51	10961	-----
	Dry	42.83	44.08	13.08	4.57	.56	12217	14383

TABLE 3.—Average analyses and heat values for separate mines and by counties—grouped according to districts.—Concluded.

## DISTRICT NO. 8—VERMILION CO., NO. 6 COAL

Index number	Moisture	Volatile matter	Fixed carbon	Ash	Sulphur	CO <sub>2</sub>	B. t. u.	"Unit coal"
91	14.44	35.04	40.99	9.53	2.37	.66	10982	-----
	Dry	40.95	47.91	11.14	2.77	.77	12836	14697
92	15.59	33.47	40.16	10.78	2.33	.89	10508	-----
	Dry	39.65	47.58	12.77	2.76	1.06	12449	14536
93	15.19	34.95	41.55	8.31	2.04	.65	10961	-----
	Dry	41.21	48.99	9.80	2.41	.77	12925	14533
95	12.59	40.16	38.53	8.72	3.49	.80	11228	-----
	Dry	45.94	44.08	9.98	3.99	.92	12845	14532
212	14.23	34.00	42.66	9.10	2.30	.77	11043	-----
	Dry	39.60	49.86	10.53	2.66	.90	12873	14616
B. M. 53	16.16	34.09	39.19	10.56	1.74	-----	10433	-----
	Dry	40.66	46.75	12.59	2.08	-----	12443	14472
B. M. 54	15.62	35.59	39.97	8.82	1.68	-----	10845	-----
	Dry	42.18	47.37	10.45	1.99	-----	12852	14554
Average	14.83	35.72	40.43	9.40	2.27	.75	10857	-----
	Dry	41.45	47.50	11.03	2.66	.88	12946	14562

## DISTRICT NO. 8—VERMILION CO., NO. 7 COAL

94	12.69	38.78	38.89	9.64	3.34	.52	11221	-----
	Dry	44.42	44.54	11.04	3.83	.59	12852	14725
97	13.18	37.85	38.65	10.32	2.54	.60	11080	-----
	Dry	43.59	44.52	11.89	2.92	.69	12762	14754
211	13.63	37.23	39.53	9.60	7.13	-----	11030	-----
	Dry	43.13	45.73	11.13	8.33	-----	12803	14671
Average	13.16	37.95	39.02	9.85	4.33	.56	11110	-----
	Dry	39.02	44.93	11.35	5.02	.64	12805	14716

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